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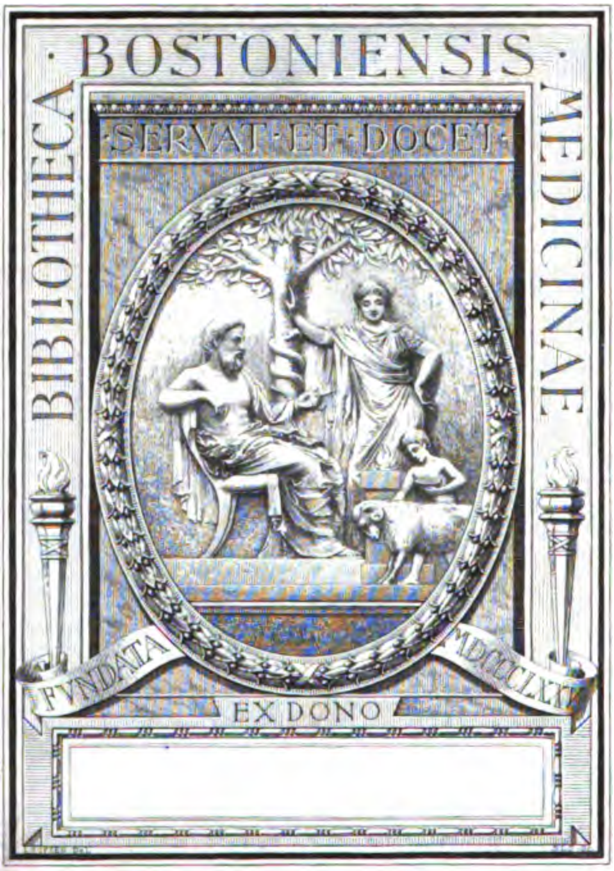

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THE SCIENCE OF LIFE.*

BY ISAAC KAY, M. D., SPRINGFIELD, OHIO.

It is surprising how little we really know, or possibly can know, of the most common objects or principles about which we so frequently speak or think. True, we may know many things about them as to their superficial qualities or manifest properties, and about their attendant phenomena and practical uses, but yet, little or nothing of their essential constitution. This is so of electricity, heat, chemical affinity and gravity, but more especially so of that subtile and powerful principle called Life, as we have it manifested in the vegetable and animal kingdom of nature. Electricity is usually defined to be a subtile agent excited with glass or amber, by which bodies are attracted or repelled or created by chemical action causing attraction or repulsion between bodies or particles of matter, producing at times, shocks of the animal system, mechanical violence, light, heat, and accelerated chemical action. These are only the effects of electricity and no explanation whatever of its real essence. Light is spoken of as the agent or medium of vision, through which the external world is made visible to man and animals by means of the natural eye. There is nothing in this definition as to its essence, for the reason that such is beyond human ken or comprehension. Heat or caloric is the principle which causes warmth, expansion of matter and combustion, and it is mysteriously connected with all the other agencies just mentioned, insomuch as, that under certain well known conditions, they are mutually convertible the one into the other. This is shown by the fact that one and the same wire, heavily charged with the electric current, will propel, heat and light up an entire traction car, or even train of cars. Then again, we have chemical affinity, acting at short distances; and astronomical attraction designated as gravity, operating at immense distances, all of them so well known by their wonderful manifestations, but nowhere revealing to us their true essences. But the most strange, incomprehensible, and important principle of all is that which we call Life, whether vegetable or animal, but more especialy the intellectual and spiritual life of man. So what few things we shall attempt to say in this short paper concerning the science of life, should, of course, not be a pretentious and necessarily vain effort to speculate relative to the essence of life itself, but simply to mention some of the better known manifestations of that marvelous principle.

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*A paper read before the Springfield Literary Club, October 24, 1904.

Philosophers have ever found it a difficult task to construct a satisfactory definition of life. In seeking such definition, it is hard to find one that does not either include more than is necessary, or that does not exclude something that should be taken in. Richerand defines life to be "a collection of phenomena which succeed each other during a limited time in an organized body." According to Blainville, "Life is the twofold internal movement of composition and decomposition, at once general and continuous." Herbert Spencer, one of earth's greatest philosophers, in his "Principles of Biology," proposed to define life as "the cöordination of action, or definite combination of heterogeneous changes, both simultaneous and successive, in correspondence with external coexistences and sequences." One of the latest definitions of life is that which has been suggested by the scientist, Mr. G. H. Lewis; "Life," he says, "is a series of definite and successive changes, both of structure and composition, which take place within an individual without destroying its identity." This definition is perhaps as good as any, but no one of them is more than approximately true, and all of them show that a perfect definition of life seems to be an utter impossibility. In a general sense, life may be regarded as that state of plants and animals, or of any organized beings, in which their natural functions and motions are performed or capable of being performed. These statements of the subject, although apparently labored attempts to define the undefinable, are nevertheless of much service in the prosecution of biological studies. By the term, Biology, we are to understand that branch of scientific inquiry which pertains to the nature and relations of living bodies, and to the discovery of such laws as govern beings of the organic world. Science should ever be accepted and honored as the great expositor of nature; and my its means we are led into many of her secrets. Although life surpasses or eludes definition, yet one knows when he experiences it, and there is no one but that may discern the difference between a living and a dead body. Physical life is antagonistic to ordinary chemical action; for the moment death occurs, decomposition commences, though it may not be at once perceptible. In order to give a better idea of life, it might be well to take as a point of departure certain facts and principles which are recognized as axiomatic, and which do not require discussion for their establishment. The best method, then, will consist in studying the most simple facts connected with the subject, and then transferring the results of such study to conditions which are more complex. Wherever we can discover physical life, we shall always find that fundamental body, the cell, and an essential function termed nutrition; and these are definitely manifested by motion, growth, assimilation, and elimination. These actions cannot be conceived of without the displacement of matter of which their rudimentary organizations are composed. Life may be regarded as a peculiar motion or vibration of matter giving rise to particular force, and by functions which are only the phenomenal expressions of this vibration transformed into physical, chemical, mechanical, or psychical motions. But a cessation of this vital motion is called death. The elements in which life had been preserved die because they are not surrounded by the conditions which are essential to the performance of their functions. Matter then becomes disorganized and forms new combinations, and the vital motion is converted into other forms of motion, such as chemical affinity, fermentation, liquefaction, etc. Thus death is the changing of the vibratory motion which is peculiar to life into other modalities of motion.

A growth of cells forming a more or less homogeneous mass may have a common life without the existence of any particular means of relations and communications between their different parts or elements. But in the more perfected and complex being, there must be special organs to receive the different vibrations and convert them into motions of another kind through the influence of a difference in material composition, and consequently of dynamication, and thus institute the various functions. As the intervention of rheophores is necessary to convert magnetism into electricity, so the vibrations which result from it form other vibrations which give rise to impressions and sensations. And contractility is the property which certain tissues possess of transforming vital motion into mechanical force. In the physical world, we can see the manner in which heat produces expansion in bodies, an effect which is utilized in so many ways to accomplish work of the greatest variety, both as to its nature and its energy. It might be well to note in this connection, that vitality has much in common with such forces as magnetism and electricity, but there is one inviolable distinction between them, and that is that life is permanently fixed and rooted in organism. The doctrine of the conservatism of energy does not hold for vitality. The electrician can demagnetize a bar of iron; that is, he can transfer its energy of magnetism into something else, such as heat, motion, or light, and then change them back again into magnetism, for magnetism has no root, no individuality, no fixed indwelling principle. But the biologist cannot devitalize a plant or organized body of any kind and then revivify it again. Among the vital phenomena we shall also find psychical ones. The nature of these latter phenomena is more complex. The brain is the particular organ of all this class of activities and possesses the power of transforming all sensations and perceptions into consciousness. It is in a certain way the general organ of the senses. Thought and will are doubtless the wonderful and incomprehensible result of what we have termed vital vibration of motion, just as electric light is the soul, as it were, of electricity. Of the original mode and constitution of this light we are entirely ignorant. It is different from all other lights, and has a vibration different from all other vibrations. The brain can think and perform its functions only under certain physical conditions. A slight change in its circulation, and an almost imperceptible lesion of its structure may modify or destroy all the psychical phenomena connected with it. The concentration of all transmitted vital motions, the conflict of all these modified vibrations in the track of nervous conductors give, as a result, a particular motion which we call the soul or natural life. Just as the lens, concentrating rays of light, produces at its focus many wonderful phenomena, so the brain can be conceived of as a concave mirror where all centripetal impressions are focalized and upon which are reflected and radiated all vital vibrations.

Nature has given all that the soul needs by way of a body. In the first place, the soul, which is a principle derived from a source much higher than the natural world, needs a highly organized physical instrument of thought and a central station, so to speak, from which it may direct the workings of the body. Nature provides that wonderful instrument, the human brain, the possibilities of which we but faintly recognize. Secondly, the soul needs organs designed to receive and record the various forms of impresions from without. Nature provides the eye, the ear, the organs of taste and smell, and the nerves whereby we feel. And for aught we know, nature may be keeping other senses in reserve until the future need of them is felt by the race. Then means of communication between the brain and the different parts of the body are required. Nature has wired the body with nerves in a wonderful manner. The brain telegraphs over these wires instructions to all parts of the body, sending its orders to cell and organ; and insisting upon immediate obedience. The brain receives telegrams, as it were, from all parts of the body, warning it of danger, calling for help and making complaints. And then the body must have the means of moving around in the world. It has outgrown the plantlike tendencies and wants to move on. Besides this, it wants to reach out after things and turn them to its own use. Accordingly, nature has provided limbs and muscles, and tendons with which to move the limbs. Then the body needs a framework to keep it in shape, to protect it from shock, to prop it up, as it were; and this bony frame, known as the skeleton, is a marvelous piece of machinery which is well worthy of our study. Then the soul of man needs a physical means of communication with other embodied souls, and nature supplies this means of communication in the organs of speech and hearing. The body needs and has been provided with a means of carrying repair material to the various portions of its structure, to build up, replenish, repair, and strengthen all the several parts. It also needs a similar system whereby the waste, or refuse matter, may be carried away, burnt up, and sent out of the system. Nature gives us the life-carrying blood, the arteries and veins through which it flows to and fro in performing its work; the lungs to oxygenize the blood and to burn up the waste matter. The body needs material from the outside with which to build up and repair its parts. Then nature steps in and provides means of eating the food, of digesting it, of extracting the nutritious elements, of coverting it into condition for absorption by the system and of excreting the worn out matter. It is worth while for any one to study something of the wonderful mechanism and subtile and mysterious workings of life in the human body. The operations of a Mighty Intelligence are here clearly to be seen; and we have a most convincing realization that the Great Life Principle is not a thing of blind chance or haphazard happening. Then we should learn to trust that Intelligence and to know that that which brought us into physical being will carry us through life, and have charge of us always, especially if we open ourselves to the inflow of that great and blessed Life Principle.

Many instructive and interesting thoughts have been derived from discussions relative to the origin of life on this globe. The science of Geology reveals to us the fact that the history of the earth's crust may be divided into two parts with reference to this point; namely, the azoic and the zoic periods; and that for almost indefinitely long ages of the past, designated as the azoic period, there had been no traces whatever of life, either vegetable or animal, on this planet. And then came on the zoic period, characterized by the existence of organized or living beings, both vegetable and animal. In the discussion of this subject, numberless questions have from time to time presented themselves for solution, many of them of little practical value in determining the exact condition connected with the earliest manifestation of life on the globe. One of these qnestions of seemingly trifling import, was as to which came first in order of creation or existence—the plant itself or the seed. The speculative philosophers had never settled this question even to their own satisfaction, nor was such settlement a matter of much importance. The evolutionist might contend for one thing and the creationist for another, but I think it may fairly be assumed that the latter class of thinkers have had the larger part of the truth on their side. The creationists claim that even aside from the question of authority, the first chapter of Genesis contains by far the most reasonable and scientific solution as to the cosmic origin of life. Their view corresponds better with the mysterious and profound scientific teachings of Geology; and moreover, it is far more easily comprehended by the intelligence of man. According to the Scripture record, the Lord said, "Let the waters under the heaven be gathered together unto one place, and let the dry land appear, and it was so. And God called the dry land earth; and the gathering together of the waters He called the seas. And God said, let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself upon the earth. And the earth brought forth grass and herb, yielding seed after its kind." And then, later on in this record, God said, "Let the waters bring forth abundantly the many creatures that hath life, the fowl that may fly above the earth in the open firmament of heaven. And God created great whales and every living creature that moveth, which the waters brought forth abundantly after their kind. And God made the beast of the earth after his kind, and everything that creepeth upon the earth after his kind. Then God made man after his own image, to have dominion over the creatures of the land and sea and air." Now, although this record was written long before mankind knew anything of geological science, yet the order of creation as here given accords fully with the history of the earth's crust as revealed to us now by this noble science. Here we have the simple historic statement of the creationist's view or theory relative to the origin of life on our globe, showing definite and separate acts of creation for all forms of vegetable and animal life. These last named philosophers base their opinion of this subject upon nothing less than the direct power and will of the Almighty. And here this whole controversy upon Life Genesis must necessarily rest for all time, notwithstanding the vain speculations and vague conjectures of man.

During the nineteenth century, much ingenuity and learning were expended by a certain school of scientists in order to set aside, if possible, this historic record. It was attempted by trying to prove the doctrine of spontaneous generation; and these attempts constitute an interesting chapter in the science of life. These strange experiments have been set forth in a masterly manner by that prince of modern philosophers and writers upon the subject of life as pertaining to the vegetable, animal, and spiritual worlds—the late Professor Henry Drummond, of Scotland. He stated that for the last two hundred years, the scientific world had been rent with discussions upon the Origin of Life. Two great schools had defended exactly opposite views; one that matter can spontaneously generate life, and the other claiming that life can only come from pre-existing life. The doctrine of Spontaneous Generation, as represented by the first named school, had been revived within recent years by Dr. Bastian, after a series of elaborate experiments on the Beginning of Life. Stated in Sabastion's own words, he says, "Both observation and experiment unmistakably testify to the fact that living matter is constantly formed de novo, in obedience to the same laws and tendencies which determine all the simple chemical combinations. That is to say, Life is not a Gift of Life, but is capable of springing into being of itself, or in other words, it can be spontaneously generated." This announcement called into the field a host of observes; and the highest authorities in biological science engaged themselves afresh upon the problem. The experiments necessary to test the matter can easily be followed or repeated by any one possessing the slightest manipulative skill. "Glass vessels were three-parts filled with infusions of hay or any other organic matter. They were thoroughly boiled in order to kill all the germs of life, and then hermetically sealed the flask to exclude the outer air. The air inside having been exposed to the boiling temperature for many hours, was supposed to be likewise dead; so that life which might subsequently appear in the closed flasks must have sprung into being of itself. In Dr. Bastian's experiments after expedients to secure sterility, life did appear inside the glass vessel in myriad quantity. Therefore, he argued that life had been spontaneously generated.

But these scientific observers afterward, of themselves, found two errors in this calculation. Professor Tyndall repeated the same experiment, only with a precaution to insure absolute sterility suggested by the most recent science—a discovery of his own. After every care, he conceived that there might be still undestroyed germs in the air inside the flasks. If the air were absolutely germless and pure, then would the myriad life appear? He manipulated his experimental vessels in an atmosphere which, under the high test of optical purity—the most delicate known test—the air was found to be absolutely germless. But here not a vestige of life afterward appeared. He varied the experiment in every direction, but the matter in the germless air never yielded life. These experiments have practically closed the question. So far as science can settle anything, this controversy about spontaneous generation is forever settled. The attempt to get the living out of the dead has failed, and it is now recognized on every hand that life can only come from the touch of life. Huxley categorically announces that the doctrine of Biogenesis, or life only from life, is victorious along the whole line at the present day. And even while confessing that he wishes the evidence were the other way, Tyndall is compelled to affirm "that no shred of trustworthy experimental testimony exists to prove that life in our day ever appeared independently of antecedent life."

Professor Drummond has critically noted and commented upon the fact that for more than two hundred years, just passed, a similar discussion had been carried on in the religious world. "Two great schools here also have advocated exactly opposite views; one that the spiritual life in man can only come from pre-existing spiritual life; the other school contending that it can spontaneously generate itself by natural course of development. Taking its stand on the initial statement of the Great Author of spiritual life, one small school, in the face of derision and opposition had persistently maintained the doctrine of Biogenesis which we have just considered. The other school, at one time, larger and with greater pretension to philosophic form had defended Spontaneous Spiritual Generation. The apparent weakness of the first named school consists in its more or less general adherence to the extreme view that religion had nothing to do with the natural life. But the weakness of the latter lay in yielding to the more fatal extreme that "religion had nothing to do with anything else." That man, being a worshipping animal by nature, ought to maintain certain relations to the Supreme Being, was indeed, to some extent, conceded by the naturalist school, but religion itself was looked upon by them as a thing to be spontaneously generated by the evolution of character in the laboratory of common life. Now, the difference between these two positions is radical. Changed from the language of science to that of religion, the theory of Spontaneous Spiritual Generation is simply, that a man may become gradually better and better, until in the course of the process, he reaches that quality of religious nature known and spoken of as the New or Spiritual Life, and as thus inducting him into the true spiritual kingdom. It is claimed by the school of naturalists that this "spiritual life is not something added from above or from without to the natural man, but that it is the normal and appropriate development of the natural man. But the science of Biogenesis opposes to this, the whole doctrine of Regeneration. The Spiritual Life must necessarily be the gift of the Living Spirit from the Higher Kingdom. The spiritual man is no mere development of the natural man. He is a New Creation from above. We might as well expect an infusion of hay to become gradually more and more living until in the course of process, it reaches vitality, as to expect a man by mere dint of becoming better and better by way of moral training, to attain unto Eternal life. The passage from the Natural World to the Spiritual World is hermetically sealed on the natural side. It is certainly both scientific and scriptural to recognize, with the Apostle Paul (1st Thess. v:23), that perfected man is a compound being, made up of three distinct entities; namely, body, soul, and spirit, and that in an important sense, these may be regarded as quite separate and distinct, one from the other, and as belonging respectively to three different departments or kingdoms of God's creation; namely, the physical, the psychical or intellectual, and the spiritual; and that we find them taking their places in an ascending series, ending with the spiritual. We also learn from this high authority, that in the order of creation, as relating to mankind, "that was not first which was spiritual but that which was natural; and learn that "The natural man receiveth not the things of the Spirit of God, neither can he know them because they are spiritualy discerned."

As the door from the inorganic to the organic kingdoms is shut and no mineral can open it, so the door from the natural to the spiritual world is shut, and no man can open it. No organic change, no modification of environment, no mental energy, no mere human effort, no evolution of character, no progress of civilization, can endow any single human soul with the attribute of spiritual life. Both science and Scripture go to prove that "except a man be born again," that is, from above, "he cannot enter the kingdom of God;" and by this latter term is expressed the New Testament designation of man's spiritual and highest estate. Except a man be born from a kingdom above him, he cannot enter the spiritual kingdom any more than the mineral can of itself enter the organic kingdom.

The Scriptures contain a clear and original statement of the Law of Life Genesis for man's highest testing. "He that hath the Son hath Life, and he that hath not the Son hath not Life." That is to say, Life depends upon contact with Life and cannot grow out of anything that is not Life. There is no Spontaneous Generation in religion any more than in nature. The power to impart this spiritual life is more than a principle; it is a personality, and that personality is God in Christ. Scientific analogy, as well as Scripture, teaches that true Spirituality is a condition of the human soul, both in this world and the next, that will need no further radical change throughout all its future. So far as life and happiness are concerned, their duration shall not be measured by the flight of years, but by the endless cycles of eternity.

THE MANAGEMENT OF ACUTE PELVIC INFLAMMATION.*

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Mr. President and Gentlemen of the Society:

In endeavoring to select a subject to bring before you for discussion I was not guided by a desire to present anything especially new but rather to bring up something of universal interest both to the general practitioner and the surgeon and as I wrote your president in accepting his kind invitation, I know nothing in abdominal surgery outside the much discussed matter of appendicitis, which is of more importance to all than the proper management of acute pelvic inflammation. Every general practitioner, even the specializing interest, sees such cases and a large part of the practice both of gynecologic and general surgeons is devoted to these disorders or their sequelae. I mean to limit this discussion to the acute phases of pelvic inflammation and confine myself largely to infectious processes having their origin in the pelvic organs proper although in the operative treatment of certain neglected appendicitis cases with abscess formation, the same principles may occasionally be applied. Before one can intelligently discuss the management of any disease or class of diseases, it is necessary to run over briefly their origin. I assume, as a matter of course, that we are all perfectly familiar with the causes of pelvic inflammation in general, but a short review can do no harm in fixing a point of departure for the discussion of treatment. Bacteriologically it is safe to affirm that practically all the micro-organisms concerned are the gonococcus, staphylococcus, streptococcus and colon bacillus. The pneumococcus, Klebs-Loeffler bacillus and an occasional rarer form of bacillary invasion are so infrequent in this locality that they may be ignored.

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Acute pelvic inflammation without the presence of some of these micro-organisms I believe never exists excepting as a complication of one of the eruptive fevers, and even then it is confined to the endometrium. "Inflammation of the bowels," so called by the laity, as a consequence of exposure to cold, should be relegated to the store-room of etiological antiques. Many times, when the cause has seemed at first to be nothing more than this, after development or confession has revealed a plain well known bacterial origin. Not only the micro-organism itself, but its life history and method of propagation throughout the tissues is of importance in establishing any method of treatment designed, to throttle an infection in its incipiency, limit the boundaries of its activity or deal with the results of its invasion. The gonococcus has a well known predilection for mucous membrane and whether it extends upon the epithelial surface itself or through the lymphatic channels immediately underlying is of no importance since it is usually very quickly overcome and limited in its spread so soon as a serous surface is met. That it may produce inflammation upon a serous surface is well known, and is witnessed by the occasional invasion of joint and pleural cavities, but the proportion of instances in which it flourishes upon serous membrane is very small.

Suppuration is usually limited in extent and wide spreading serous inflammation as the consequence of gonorrheal infection is almost unknown. Plastic exudate with subsequent partial absorbtion and remains in the form of adhesions is ordinarily the limit of its destructiveness. In the peritoneal cavity but few cases are on record of pure gonococcus infection having produced a fatal form of peritonitis and its limitations are reached when tubal abcess and plastic peritonitis binding the tube to neighboring structures has occurred. Although the gonococcus is very tenacious of life when not confined as in the urethra and cervical glands, it dies early leaving sterile pus when obliged to remain in contact with its own secretions as in a tubal abscess. Colon bacillus activity is also limited in extent, excepting under unusual circumstances. I cannot conceive it possible for a full term labor to take place with a half dozen vaginal examinations without colon bacillus infection of the vagina and cervix. The perineum is the habitat of myriads of these bacilli and they must of necessity be introduced into the vagina in considerable numbers with each examination, but trouble from this source either after abortion or full term labor, unless associated with some other organism is rare, and one is driven to the conclusion that it is not under ordinary circumstances, a virulent organism or else that the system is constantly fortified against it. Staphylococci, spread by continuity of tissue and in the pelvis certainly through the lymphatics as well, but unless of extraordinary degree of virulence nature is able to throw out such an army of leucocytes that the invasion is checked and that which appeared to be a spreading infection is localized with either resolution or suppuration following, depending upon the degree of virulence of the germ and the resistance which the individual is able to offer. Streptococci propagate themselves and extend widely along surfaces whether epithelial or endothelial, as is seen in erysipelas of the skin, general septic peritonitis, endo and pericarditis, etc., and while there appears to be a great variety of these organisms of different degrees of virulence, the results are usually the same, viz: a widespread infection with relatively slight resisting power upon the part of the body to repel it and it is of no material importance whether they are imbedded in the surface of the tissues or the lymph channels of that region, the practical part is their failure to be limited, either by the anatomical peculiarities of the part involved or nature's own efforts at localization, in so striking a degree as in invasion by gonococci and staphylococci.

Clinically pelvic inflammation is due to two factors, contact of gonococci with mucous surfaces or the other varieties with a wound of some description. Theoretically then the prevention of pelvic inflammation is simple enough, the avoidance of gonorrhea and absolute asepsis in all manipulations about the pelvic organs, whether that be through the genitalia or abdominal incision, but actually the solution of the problem is impossible, so long as men with uncured gonorrhea will marry, the surgeon's technique cannot be perfect and midwives, patients themselves, and an occasional criminal practicing medicine will induce abortions with any convenient dirty instrument. The surroundings in obstetric practice as such and will be for years to come, that ideal asepsis is obtainable in exceptional instances only, so long as this is true infection will occur even with accidental abortion and in otherwise perfectly normal labors. In spite of all this many avenues of entrance for infection of the pelvis might be closed. I may mention in passing the office use of the uterine sound itself probably clean but which may convey gonococci above their first natural barrier, the internal os. Slight tears of the perineum and vagina, imperfect emptying of the uterus, too hasty resort to manual delivery of a supposedly adherent placenta, the ungloved obstetric hand, the obstetric douche given by an untrained nurse whose knowledge of asepsis extends only so far as the odor of carbolic acid, and many others with which we are all familiar, but which we do not realize because disaster follows so rarely. Pelvic inflammation translated more minutely means, of course, cellulitis, salpingitis, oophoritis, or pelvic peritonitis, one or all combined. Objection has been offered to the term cellulitis by some authorities of great repute who insist that all processes heretofore classed under that heading belong to the tubal inflammations and that inflammation of the cellular tissues about the uterus and in the broad ligament are merely secondary. I am certain, however, that acute pelvic cellulitis does exist as an entity and that it is due to an infected deeply torn cervix, but its treatment does not differ from that of pelvic peritonitis. In fact, in the treatment of all of these processes more depends upon their bacteriological origin, than the actual pathological lesion which we think we can demonstrate by bi-manual examination and I believe we should always make an especial effort to determine the presence or absence of gonorrhea before applying any method of treatment, as the ultimate outcome of gonorrheal cases is so different from those of ordinary septic origin. Pelvic peritonitis due to the dripping or leakage of a gonorrheal tube rarely destroys life and for reasons given earlier usually goes on to a quiescent stage when the results can be overcome by a relatively safe operation. The outcome of streptococcus and staphylococcus infection is always in doubt, early death may occur, a localized abcess may form or the inflammatory process be of so transitory a nature as to hardly inconvenience the patient. If resolution does take place it is far more apt to be complete than in gonorrhea. In fact I believe that once having a gonorrheal tube means always having a crippled, painful, useless organ.

The object of any treatment in pelvic inflammation must be to mitigate suffering, save life and preserve the integrity of organs so far as possible. It is of course the infection which kills and not the inflammatory process induced by infection, but inflammation gives rise to the pain and leaves disorganized organs in its wake. Strictly medical treatment relieves pain, assists in the preservation of life but can do nothing to prevent the damage wrought through hypertrophic thickening of tubes and ovaries or the distortion brought about by adhesions. It is an open question whether any medical means which we have exercises any control over the infectious process itself. Many things are vaunted for this purpose but there is not the unanimity of opinion concerning them that there is about diphtheria antitoxin, for example, neither do I know that there is any experimental evidence showing how the toxins of septic poisoning are eliminated from the body or whether many of them are not destroyed there, but the results obtained from efforts at elimination are better than those directed towards limiting the activity of infections by medicine employed for that purpose. Saline solution intravenously, subcutaneously or per rectum produces at least temporary improvement and for some hours the skin and kidneys act more freely. Evacuation of the bowels often results in lowering the temperature, but here I wish to protest against the treatment of acute inflammatory disorders in the abdomen by violent purging. The theory that the abdominal cavity can be drained through the intestinal tract has never been sufficiently demonstrated and the view that violent peristalsis may convey infection to previously uncontaminated portions of the abdominal cavity seems to me much more rational. I know that I have seen great harm done by the administration of salts, castor oil, etc., in cases in which the infection was localized, and one or two instances of rapid collapse and death following brisk catharsis in similar collections of pus higher up have come to my notice. The good results from evacuation of the bowels are similar whether the inflammation is in the abdomen, thorax or skull, and while drainage of an infected focus is certainly good practice, there are better and more appropriate routes than through thirty odd feet of intestine. With the symptomatic general treatment we are all familiar, but here again I wish to protest against the too early and frequent resort to such stimulants as strychnin. Strychnia and adrenalin should be used only when a failing heart and paralyzed vasomotors demand them and then results are obtained, whereas if they are given upon the slightest indication early and late, in the last desperate crisis we fail to obtain any benefit. I have never been able to see any good effect from local applications to the abdomen for the relief of pain outside of that obtained by heat or cold, and of the two, cold is oftener more grateful to the patient, in fact, she will often cease clamoring for narcotics so soon as the ice bag is applied. The so-called hygroscopic applications have never appealed to me, either theoretically or practically and blistering causes more discomfort than it relieves. The use of opium is a mooted question. Without a doubt it constipates and numbs symptoms, but if the bowels have been completely, although gently, evacuated early in the case, I am not at all certain that the avoidance of peristalsis is not a good rather than a bad result of its administration. So far as masking symptoms is concerned, that is just what is aimed at when it is given and the decision to operate or not should be arrived at before it is begun. If I were obliged to choose absolutely between the methods of treatment by catharsis alone or opium alone, I should unhesitatingly choose the latter with the feeling that no more patients would be lost and those that lived would have adequate relief from pain and suffering. Thus the medical treatment is summed up in rest, the ice bag, early gentle, but complete evacuation of the bowels, efforts at securing elimination, possibly tentative use of such agents as are supposed to stimulate leucocytosis, the judicious use of stimulants, if general toxemia supervenes, and the cautious use of narcotics after the question of operative treatment is decided.

The surgical treatment simply adds another chapter, but comprises the former as well. No surgeon can be a good surgeon if he is not in addition a good medical man. He may be ever so clever an operator, but unless he has a good working knowledge of internal medicine he can never be so successful in desperate cases as his neighbor with less mechanical dexterity and more knowledge of general medicine. The first effort, surgically, must be to cut off the original focus of infection so far as possible. This is obviously impossible in the case of gonorrhea, but in puerperal and post-partum cases a great deal may sometimes be accomplished in this way. Thorough cauterization of all infected lesions in the perineum, vagina or cervix and sealing the lymphatics with pure carbolic or silver nitrate does much toward aiding nature in her battle with the intra-abdominal infection. Intra-uterine manipulations are contra-indicated unless there is reason to suspect the presence of debris in the uterine cavity and even then unless the abdomen is to be opened and drained at the same time. Every motion of the uterus ruptures fresh adhesions and disseminates infected serum and in gonorrheal cases can do no possible good. Uterine exploration and gentle curettage which are of such value in puerperal sapraemia are interdicted when an infection has spread beyond the confines of the uterine cavity for the removal of the lesser only aggravates the greater evil. When one considers the pathology of intra-peritoneal pelvic infection, he is impressed not with nature's inability to save life, but with the amount of machinery which she sets in motion to accomplish it, and he is at once overtaken by a desire to assist her by operative intervention. In the past two principal methods have been in vogue with this object in view, one by abdominal section and removal of the grossly diseased organs, the other to await resolution, if it occurs and to incise and drain only when pus has formed as a large localized abcess. There are two serious objections to laparotomy and removal of tubes and ovaries, the subjects of acute infection. The first is the utter inability to say how little may be sacrificed with the result that the appendages and frequently the uterus are removed in toto. The other is the additional risk of operating in the face of acute peritoneal infection. There is no analogy between operation and the removal of an acutely inflamed appendix, and a similar procedure for acute salpingitis. In the former a useless dangerous organ is gotten rid of and there is no need of soiling peritoneum not already involved. In the latter case clean peritoneum is almost certain to be contaminated, more manipulating must be done and a greater or less amount of raw surface left upon the broad ligament to absorb toxic products. So long as the process is entirely gonorrheal, no great harm might be done, but cases of puerperal infection are open to marked spread by reason of this procedure. It is in this class of cases, puerperal, that more or less complete resolution may occur and the patient not only risks her life, but needlessly loses organs essential to her well being. On the other hand, to await the advent of resolution or the formation of a localized abcess means to doom all patients who are the victims of virulent infection, for in such resolution does not occur and large well walled off abcesses rarely form. In the less virulent cases resolution and absorption take place only after prolonged illness with great suffering and even after convalescence is presumed to be well under way, the resisting power of the tissues is many times overcome and the medical attendant is surprised to find the patient's pulse a little elevated at night, when bi-manual examination reveals a large collection of pus pointing in the vagina, bladder, bowel or even in the groin. For several years some of our most prominent abdominal surgeons have advised early rapid operation, with no intra-abdominal manipulation, and free drainage for general peritonitis. Recently, there has been added to this the effect of postural drainage, the effort being to drain free fluid into the lowermost portion of the pelvic cavity by the effect of gravity, where absorbtion is not so rapid. An application of the first principles as long ago advocated by the late Wm. Pryor of New York, is the most rational method of procedure in acute inflammation of the pelvic structures; that is, early incision and drainage and that through the original vault. This procedure has frequently been confounded with vaginal puncture, but there is no more resemblance between the two operations than there is between tapping for ascites and abdominal section.

The advantages over abdominal section in acute cases are first, its simplicity: a vaginal incision can be made in three minutes in the ordinary case; second, the complete absence of shock; third, the peritoneum of the general cavity need never be injured mechanically or by the distribution of virulent serum or pus upon its surface. Owing to these three factors it can be practiced in cases in which section through the abdominal wall would be absolutely fatal. Again, it may be entirely exploratory in character and if an error in diagnosis has been made the incision can be closed by two or three sutures without the risk of the development of hernia. At the last meeting of the Ohio State Medical Society, I reported a case of ectopic pregnancy in which the diagnosis was in great doubt, in which it was simply and rapidly cleared up by a two-inch incision in the vaginal vault. The keynote of treatment in these cases is drainage with the object of conveying outside the body serum or sero-pus or pus, containing the infecting micro-organisms and the toxic products of their activity rather than allowing them to remain for nature to overcome and eliminate, and down-hill drainage through the vaginal vault is obviously more natural than uphill through an abdominal incision. Another advantage is the possibility of draining infected cellular tissue in the broad ligament, through the same incision and without intra-abdominal contamination. The technique is simplicity itself, and I have followed that developed by Pryor, excepting in the matter of posture during operation. Pryor advised the exaggerated lithotomy position witht elevated hips, but it has seemed to be unwise to do this with fluid in the pelvis, presumably not surrounded by adhesions. After preliminary cleansing, followed or not by currettage depending upon the nature of the case, but oftener without than with, the vaginal mucosa is snipped transversely, this incision is not more than one inch wide, is deepened by blunt dissection in close contact with the posterior cervical wall until the peritoneum is reached and severed, the fingers are introduced and the incision stretched to double its original length. All instruments are laid aside, one finger introduced into the pelvic cavity and all œdemations or boggy locations palpated and opened with the greatest ease. The pelvis is never irrigated even when a localized abcess is present, but after spontaneous evacuation and sponging, a large T drain is introduced and its retention secured by a suture to the edge of the incision. If the case is an early one and no pus is present, the pelvic cavity is loosely packed with weak iodoform gauze, instead of using a tube. There is no pain from the operation and in the majority of cases the previous pain quickly subsides. Not all cases make a complete convalescence. Those in which the tube is the primary offending organ are apt to have remaining a fistula in the vaginal vault, if the tube is opened, or a tubal tumor slowly forms after drainage is removed and the acuteness of the infection has subsided, but the period of primary convalescence and retention in bed are materially shortened, complete recovery is assisted in many cases without the removal of any organs, and those in whom abdominal section is necessary are transferred from a class full of danger to one of relative safety. I should perhaps emphasize the fact that best results are to be obtained in post-abortion cases and those produced by unclean manipulation of the uterus and that the least favorable are the pure gonorrheal infections. In fact, I have not been able to satisfy myself that in the pure gonorrheal cases the procedure is of much value excepting in a palliative way, but clear cases of gonorrheal salpingitis and peritonitis are often subacute and rot the objects of such solicitude as the more virulent staphylococcus and streptococcus infection. In two instances I have been able to avail myself of this route for the opening of large appendiceal abcesses in profoundly septic patients and have then removed the appendix in the ordinary manner, after drainage had practically ceased, and in women this route should always be selected when possible. It is well known that the enormous abcess cases in which the patient's condition is precarious and the appendix hard to find give rise to a high percentage of fistulae and the wide open incision and drainage leaves many hernias, even when fistula does not follow. Here the avoidance of hernia by vaginal incision is of decided advantage to say nothing of the value of the absence of a fistulous tract when the appendix is removed, as it should be before the patient is declared well. I will not weary you with a detailed report of cases, but say in conclusion that vaginal section has certainly been carried to extreme lengths in some hands, especially for chronic cases, while it has been tabooed by others as being of no use for any purpose, but it is surely finding its proper field, and my own confidence in the procedure in the class of cases under consideration is firmly established.

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MEDICAL JURISPRUDENCE.*

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As I understand it the subject assigned me is "Medical Jurisprudence;" at the same time I am informed that some of your members desire to hear something upon the subject of malpractice, and I expect to volunteer a few random suggestions myself. So that I have widened the scope of this paper to the title, "Medical Jurisprudence, Especially Malpractice, the Relation of the Doctor and the Lawyer to each other, and Random Remarks." In doing this I realize that I am spreading over a considerable territory. Generally speaking it is best for one to confine himself to narrow limits. It is by specializing that the best results are reached. A noted German philologist or more particularly speaking, an etymologist, who had devoted his whole life to the history, derivation, uses, etc., of a single word of three syllables, said, on his death bed, that his only regret in life was that he had not confined his investigations to a single syllable of the word. This looks like an extreme case; it is an extreme case, but after all, we know as a matter of fact that the real scholars of the world are found in Germany where they specialize and dig and dig. But a man cannot begin as a specialist. A large fund of general knowledge is necessary. The side lights must be thrown on. Learning and skill center in the specialist. They do not radiate from him. What I mean by this is that a man, for instance, may be reared on a farm, and learn what the farm boy learns of nature and things in general, and get the mental and physical discipline derived from hard work; hard physical toil. He may go to the academy, and to college and learn what is taught in the schools; take up theology, and acquire proficiency in the Scriptures; learn a smattering of law, and then take up the study of medicine, and graduate as a general practitioner, and finally settle down to the treatment of the eye, or the practice of abdominal surgery, or some other specialty, and make a grand success of it, but he cannot begin his career as a specialist. All of the different branches of human endeavor, science, art, literature, and all learning and skill interlace and run into each other so that some knowledge of many if not all of them is necessary to a complete mastery of any one. While a lawyer or judge ought to be a well informed man, and to be a success in his profession or office he must to some extent be informed, yet there are many things he does not know, and it often turns out in the investigation of matters in court, that special information must be had pertaining to the subject. The elucidation of such matters pertaining to medical subjects is called Medical Jurisprudence. The technical definition of the term is as follows:

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"Medical Jurisprudence is that science which applies the principles and practice of the different branches of medicine to the elucidation of doubtful questions in courts of justice." Technically speaking the whole subject of medical jurisprudence is a question of evidence. The medical expert when placed on the witness stand is called upon not only to state medical facts but almost always, also to express an opinion on the special facts of the case under examination, that is, give opinion evidence. The classes of cases on which such evidence may be used are innumerable; in fact, in almost any conceivable case such evidence might be of service. I will call attention to a few of them. All matters pertaining to the sexual relations, such as rape, pregnancy, paternity, doubtful sex, sexual disability, such as sterlity and impotency, tendency by the curtesy as effected by birth, was a child born alive, the period of gestation and the like. It sometimes occurs that questions involving the ownership of vast fortunes depend and are solved solely upon the testimony of medical experts. A man of wealth dies suddenly leaving a widow. Two or three months afterwards the widow remarries, and somewhere between nine and twelve months after the first husband's death gives birth to a child, and dies in childbirth. Whose heir is the child? Such questions as this must be solved by the medical expert. Other cases involving such evidence are foeticide, all cases, classes and degrees of homicide, personal identity and survivorship. Other cases are feigned diseases, blood stains, all cases of poison embracing the different classes of poisoning, such as irritative, neurotic and the like. Cases of assault; all cases where violence has been used, cases involving the sanity or insanity of a person; cases as to whether death has actually occurred, and if so when it did occur, and in short, almost all conceivable cases. It is only necessary to state the case to see that in some phase of it medical evidence may be necessary.

As I have been asked to give some attention to malpractice as applied to the physician and surgeon, the investigation of which always brings in medical evidence, I shall proceed to notice a few of such matters. Malpractice means *bad* or *unskillful* practice in a physician or surgeon, whereby the health or physical condition of a patient is injured. *Wilful* malpractice takes place when the physician or surgeon purposely administers medicine or performs an operation which he knows and expects will result in damage or death to the individual under his care. As in the case of criminal abortion an operation to produce sterility, or intentional poisoning. Negligent malpractice comprehends those cases where there is no criminal or dishonest object, but gross negligence of that attention which the situation of the patient requires, as if a physician should administer medicine while in a state of intoxication from which injury would arise to his patient. Ignorant malpractice is the administration of medicines calculated to do injury and do harm, which a well educated and scientific medical man would know were not proper in the case.

The physician or surgeon who offers his services to the public impliedly agrees with those who employ him that he possesses that reasonable degree of learning, skill and experience, and that only, which is ordinarily possessed by persons engaged in that profession, and the implied contract which the physician thus enters into does not extend to an agreement that he will cure or that the surgical operation will be a success, but only that he will exercise such reasonable skill and diligence as are ordinarily exercised in his profession by physicians and surgeons. The law does not require the highest degree of skill and science. Persons who hold themselves out to the public as physicians and surgeons are not required to possess the highest degree of knowledge and skill which the most learned in their profession may have acquired, but they are bound only to possess and exercise in their practice the average degree of knowledge and skill possessed and exercised by the members of their profession generally in the locality in which they practice. The locality in which a physician or surgeon practices is to be taken into account. A physician practicing in a small town or sparsely settled district is not supposed to exercise the care and skill of one residing in and having the opportunities of a large city. He is bound to exercise the average degree of skill possessed by the profession in such localities generally.

As to the different schools of medicine the law does not favor any particular school, and the treatment of a physician is to be tested by the principles of the school to which he belongs. Physicians and surgeons should keep abreast of the times, and make use of the latest and most improved methods and appliances, having regard to the locality and general practice of the physician. It is the law that while a physician or surgeon is always required to use the latest and most improved methods and appliances, he must not be a pioneer, unless a successful one, because if he uses new methods without their having been first tried successfully by somebody else and failure results he is liable in damages. This rule of law is very much like the former requirement of the statutes which made it imperative that a practitioner must have had so much experience in dissecting, and yet made it a penal offense to procure a dead body.

Physicians are sometimes delicate about continuing in attendance upon a patient after marked improvement has been shown. If a physician stops at this point he runs the risk of grave responsibility to himself. When a physician or surgeon is sent for to attend a patient the effect of his responding to the call, in the absence of any express agreement, would be an engagement to attend the case as long as it requires attention, unless he gives notice of his intention to discontinue his visits, or is dismissed by the patient, and he is bound to exercise reasonable and ordinary care and skill in determining when his attendance should cease. If he stops before the patient is well without apprising the patient of his condition, and giving notice that he will not attend further, and the patient should become worse, and bad results follow, the physician would be liable. So, you should continue in attendance until your patient is entirely out of danger, and you must not out of delicacy or fear of its being said that when you get hold of a case you never let go, cease attendance before your patient is entirely well.

Physicians and surgeons are bound to give their patients the benefit of their best judgment, but they are not responsible for any mere error of judgment. An error of judgment may be so gross, however, as to be inconsistent with reasonable care, skill and diligence. There is no implied contract upon the part of the physician that he will effect a cure, and he can be held to a guarantee of such only in virtue of an express agreement. If a physician or surgeon is not competent, and feels that he is not competent to treat a particular case, it is his duty to recommend the employment of another, but if he is competent and so considers himself, and is in doubt concerning the case he ought to use his best judgment as to consultation with other physicians and surgeons. If he knows of another whom he believes would know what to do he should suggest to the patient the expediency of calling him, and leave it to the patient. The time has come when it is generally well to take the patient into confidence. The day when the physician must keep up the belief that he knows it all and cannot be informed or make a mistake is past. It often gives the doctor increased importance in the eyes of his intelligent patient if he frankly informs the patient that there are things about his case that must be watched and studied, before he is able to say fully what to do. The refusal to accept the assistance of another in the treatment of a case imposes no higher duty upon a physician or surgeon; but in an action for malpractice it is always best for the defendant to show that he called in another skillful physician or surgeon to assist him. In all doubtful cases, in all cases where the physician or surgeon is not clear as to his duty or mode of treatment it will be found to be a great protection to himself, if he shall have called in another competent physician or surgeon.

Another thing a physician or surgeon ought to do after performing professional services is to promptly render his bill. There are cases on record where it was taken and held to be decidedly against the medical man when he neglected for a long period to send in his bill. It has been claimed with effect before the court and jury, that if he has any confidence in the value of his services he would have asserted his claim promptly, and the fact that it stood in one case for eighteen months before he sent in his bill was regarded as a strong circumstance against him, and tended to show that he did not regard his services as of much value. Another thing; the fact that a physician or surgeon offers his service gratuitously does not effect his duty to exercise reasonable or ordinary care, skill and diligence.

Many of the members before me will recall the case of Cutlip against Dr. Lottridge, tried in the Common Pleas Court of this county. You will also recall his triumphant vindication by the court and jury. The action in that case was against the defendant for the failure of the doctor to effect a cure of plaintiff's eye, and it was alleged that the proper treatment had not been followed. Upon the trial of this case the court among others gave the following instructions to the jury which correctly lay down the law as to such a matter: "If the jury are satisfied from the evidence that the defendant treated the ailment of the plaintiff with ordinary care, diligence, skill and knowledge, then he is not liable in this action, although the plaintiff may have lost the sight of his eye. If the jury believe that the ailment with which plaintiff was afflicted and suffered at the time he applied to the defendant, and at the time the defendant treated him, was such that the injuries thereafter resulting to the plaintiff probably would have resulted under any treatment that could have been given him, then the defendant is not liable, and your verdict must be for the defendant. If the jury believe from the evidence that the remedies and course of treatment employed by the defendant for the plaintiff's eyes was such as physicians in the same neighborhood and community would have used and employed the plaintiff cannot recover, although it may appear now that by the use of different remedies a different result might have been achieved. Where a person employs a physician to treat a disease the patient is bound to adopt and follow out all reasonable directions and requirements of the physician relating to the treatment and care of the disease or injury, and if he does not do so, and injurious consequences effecting the disease result from the failure so to do, he cannot recover of the physician alleging the want of skillfulness on the part of the physician. The highest skill is not required of a physician. The criterion must be the standard of professional excellence in such localities as that in which the physician practiced. The mere failure to effect a cure raises no presumption of the want of proper care, skill or diligence."

Numerous cases arise growing out of the administration of anesthetics. Every anesthetic is a poison if pushed too far. Consequently great care and caution must be used in their administration. Under a statute in this state it is made unlawful to administer anaesthetics without the presence of a third person competent to be a witness, and any physician doing so subjects himself to a fine of not less than $5.00 and not more than $25.00. In this connection it may be well to refer to a few other statutory provisions. Any physician who administers any poisonous drug or medicine to another while in a state of intoxication subjects himself to a fine of $100.00, and imprisonment for twenty days; administering any secret drug to another subjects himself to the same penalty. Whoever with intent to produce the miscarriage of any woman prescribes or administers to her any medicine, drug or substance whatever unless such miscarriage is necessary to preserve her life, or is advised by two physicians to be necessary for that purpose, shall, if the woman either miscarries or dies in consequence thereof, be imprisoned in the penitentiary not more than seven years, and not less than one year.

It will be observed that the above statute is very strict. If one of you gentlemen should be called to a long distance in the country, and should there find a woman in labor, and should be of the opinion that it was necessary to take the life of the child to preserve her life, if you do so your own opinion will not protect you, and you take upon yourself the burden of proving that such action was actually necessary to preserve her life before you can be excused for doing so, unless you call in another physician who also advises the same thing, which under the circumstances may be impossible. In your efforts to save *her* life you risk *your* liberty. This should be remembered. A physician or surgeon is responsible for the skillfulness of his assistant. If he knows his assistant is incompetent or unskilled and injury results the physician is liable.

In all circumstances a high degree of common sense is required of the physician or surgeon. It is usually the rule that the physician or surgeon is requqired to inform the patient of any untoward condition; but sometimes it is found best not to do so. A case in point is that of an eminent member of your profession, Dr. Palmer, of Cincinati, who while closing an incision broke a needle in the tissues and could not find and remove the broken portion. He closed the wound without informing the patient of the acident. Shortly afterwards he met with an injury himself, and remained unconscious for a long period. In the meantime the broken needle gave serious trouble, and an action was brought against him for malpractice, charging unskillfulness and negligence in breaking the needle off in the patient and failing to disclose the fact. The defendant took the ground and made the claim that in the then weakened and nervous condition of the patient it was better that she should not know the fact, and the court sustained his claim, and he was relieved of liability.

Concerning the duties of a physician in respect to infectious diseases it is incumbent upon him when attending such diseases to take such precautions as will prevent his carrying and spreading such disease to other patients who are not so affected, and if he should communicate the disease to another person, especially if the patient had requested him not to attend such diseases, he would be liable for damages resulting to the patient from contracting such disease. Much more might be said concerning the law as to the different branches of practice such as fractures, dislocations, abdominal surgery, cranial surgery and the like, but what I have said generally as to the skill and diligence required, applies to all cases, and what I have said with reference to the necessity in all doubtful cases of having another physician or surgeon in good standing, especially applies. Many cases of malpractice or alleged malpractice, grow out of reducing fractures and dislocations; those services are usually required to be done when the parts are highly inflamed and much enlarged, and it is difficult for the most skillful surgeon to determine whether the bones have been placed in the proper position or not. After the inflammation has gone down, and the parts have assumed their natural size and shape, even a layman might see that something was wrong. In such cases, and in fact all cases of any doubt or question it is the part of prudence for a surgeon to call in another surgeon of good standing in order that he may have not only the benefit of the judgment of another qualified person in ascertaining the facts whether the fracture or dislocation has been properly reduced, but as well for the purpose of having a good witness with full knowledge of the facts in the event of an action for malpractice. If a nation is prepared for war, it is more likely to have peace. So with an individual. The doctor who is fortified with credible evidence that he did all that skill and diligence could do is not only reasonably safe from attack by means of the action for damages for malpractice, but he is sure to win if attacked. You doctors are doing the right thing here in getting together. You want to know each other. It is for your mutual good for each of you to know that the others are skillful and diligent, then it is easy for you to stand by each other, and stand together. While it is not exactly analogous, the point may be illustrated by the remark of one of two suspects who said to the other, "If we don't hang together, we are in great danger of hanging separately."

Speaking of standing by each other reminds me of an instance: when I was attending law school in Cincinnati there were a number of medical students boarding at the same place. Some times some of them would go with me to attend law lectures, and frequently when none of my lectures were on I would go with them to the medical lectures. I attended one evening when one of the professors delivered a lecture on "Medical Ethics." Among other things he said in substance, "Young gentlemen, you are about to finish up your studies in this institution and be certified as competent, and go out into the world to practice. Of course you do not know all of medicine and surgery, but you do know enough to begin, before you will be certified by this institution, and when you go out from here you go certified not only as competent as far as education and training are concerned, but you start out as gentlemen. Each of you should conduct yourself in such way as to retain the confidence and respect of every member of his profesion. You will go out into communities, you will do the best you know how under the circumstances of the different cases as they arrive. No doubt in many instances the result will not be such as you anticipate. After doing your best, complaints will be made, and you will be subject to suits for damages for malpractice. It is in such matters that you want to stand by each other. You no doubt now think of course I will stand by my brother if he is right. That is not the point. Your enemy will stand by you if you are right. Your friends will stand by you if you right or wrong." The professor who gave utterance to this sentiment was Dr. William H. Mussey, at that time one of the most eminent surgeons in the United States. Some years afterwards when I had to undergo a serious surgical operation I went to Dr. Mussey and had him perform the same.

The man who upholds the brethren of his profession is the man to be relied upon. Whenever a man slanders a professional brother, in a certain degree he slanders himself, and furnishes a club for an enemy sometime or other to hit him over the head with. Whenever one doctor says of another that he didn't do this or that correctly or made a mistake here or there, or charged too much for his services, in the very utterance of that sentiment he gives somebody an opportunity to quote his own remarks against himself later. As to the relation of the doctor, meaning by the word, doctor, as I have used it throughout this paper, the general practitioner of medicine and surgery, and the lawyer I have found that it is an excellent thing to be on intimate relations with a good doctor. The highest duty a doctor can perform is not to cure his patient, but to prevent him from getting sick. I have heard that the emperor of one of the Eastern countries keeps in his employ and pays a liberal salary to one of the most eminent physicians in his empire whose duty it is to keep the emperor from getting sick. Whenever the emperor falls sick the head of the physician falls in the basket. I think this is really too severe, but the greatest advances in civilization today are probably owing to the protective and preventative measures brought about by the self-sacrificing acts of the physician. It irritates and pains me when I hear people say that doctors make people sick in order to cure them, when I see the doctors keeping their own pockets empty by their successful efforts to prevent people from getting sick. Look at the self-sacrificing acts of members of your profession in testing and determining the means and nature of propagation of yellow fever, for instance, one of the brightest and best going down to death in making the necessary experiments, and now yellow fever is almost a thing of the past. The average length of life has been largely extended within my recollection all owing to the preventive measures discovered and enforced by physicians. There ought to be some method by which physicians would be paid for their efforts in preventing sickness as well as for curing. A physician ought in time to be able, if given proper facilities, to inspect a man, direct him as to his method of living and as to his food and drink, and be able reasonably to predict a considerable time in advance his ability to work, and meet his engagements. The best efforts of the greatest lawyers are at this day directed toward keeping their clients out of litigation rather to winning law suits. I remember the time when riding up and down on the old M. & C. railroad when scarcely a trip was ever made when it was not necessary to stop to repair the engine, which had broken down on the way. Now such accidents very seldom occur. It is all owing to the ability of the inspecting mechanic to examine the parts of the engine, and predict with reasonable certainty that they will last and be useful a definite period in advance. So it should be with the physician.

As I said in substance in the outset, all the walks and works of life are so closely allied that it is difficult to tell where one department leaves off and another begins. Every man ought to be more or less a physician. That is, he ought to know enough about his own system, and the rules of health to know when he needs a doctor, and every doctor ought to be more or less of a lawyer. He ought to know enough about the law to know when he needs to call on one for advice, and every doctor in the practice of his profession will find an innumerable number of cases when he needs the advice of a lawyer. It is an excellent thing for every doctor to have a lawyer on his string. Have some lawyer of ability upon whom you can rely, and upon whom you can call readily and freely for advice, in all matters where questions of law may be involved. Scarcely any case in the hands of a physician or surgeon can be conceived in which a question of law may not arise. In all such cases a doctor ought to have free access to a lawyer. Every business of importance that is carried on in these later days has connected with it its legal representative. The President of the United States, and national officials have for their legal advisor the attorney-general; the governor and other state officials of Ohio, have the attorney-general of the State; the officers of the county have the prosecuting attorney; the city officials have the city solicitor; every building association has its solicitor and every large corporation and important business firm has its attorney. Every doctor should have his attorney, not for the purpose of winning law suits, but to keep him out of litigation; not for cure but prevention. When I was a young man starting housekeeping, I felt the necessity of economizing and concluded I would save expenses by buying me a medical book to which I could go and avoid the payment of doctor's bills. I bought a well known work, called "The Family Physician," and during my liesure moments I gave some attention to its examination, getting ready for emergencies. I would read about the symptoms and some simple treatment, but when it came to the place where the case was developing to the point where it seemed to me the book ought to tell me something to do, I found that it would invariably say, "At this point it is best to call a physician." At the time I was disgusted with the book, but when I had experience with actual sickness and followed its directions by applying the simple remedies, and then calling a physician, I found that the book was right, and now after a good many years of life and experience the only amendment I would suggest to the book would be to have the advise, "At this point it is best to call a physician," placed very much earlier in the work. In fact it ought to be about the whole thing. It is every man to his business, and the closer he sticks to it the better he will do, and now in these matters, medical jurisprudonce, and especially malpractice, I have only these further suggestions to make: Let the physician or surgeon use his every day knowledge and information; let him exercise his common sense and whenever a question arises in his mind as to whether he is acting according to the law, or whether he will be protected or not, "At this point it is best to call a lawyer."

DR. BENJAMIN RUSH AND THE UNVEILING OF HIS MONUMENT.

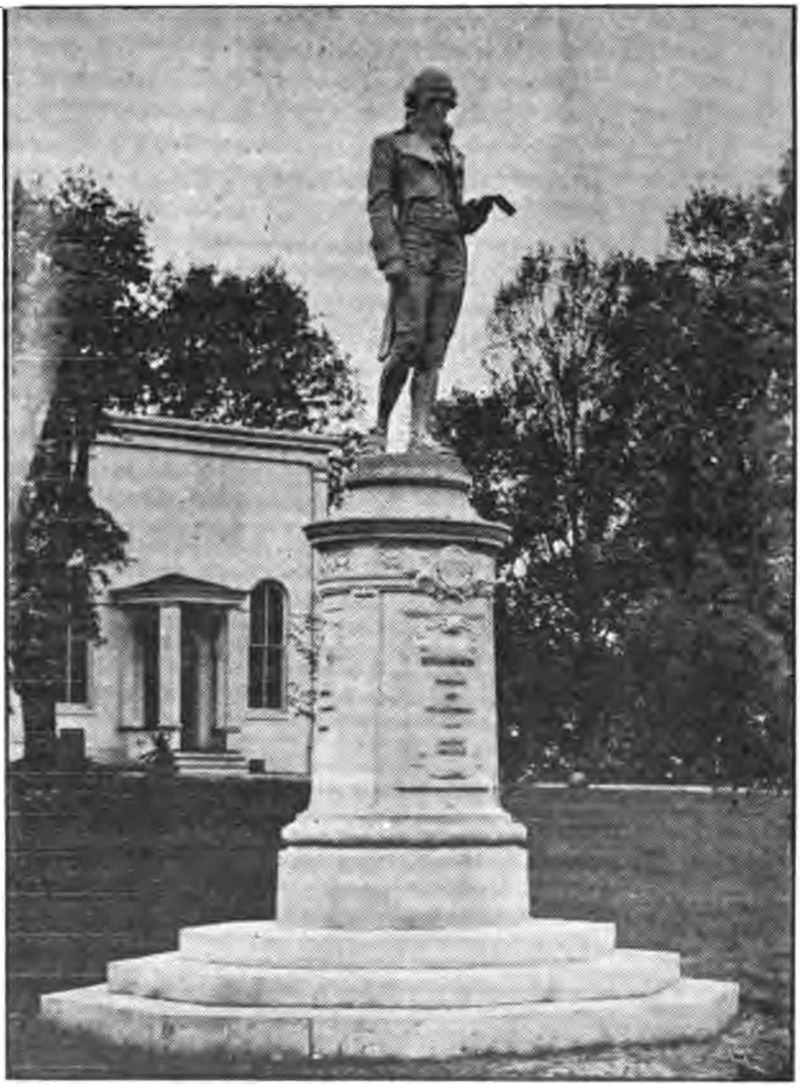
BY JAS. U. BARNHILL, PH. D., M. D.

The American Medical Association has honored itself by perpetuating in bronze the likeness and memory of the great physician, patriot and philanthropist, Dr. Benjamin Rush. Through the courtesy of the Washington Evening Star we are enabled to present our readers with a photoengravure of this beautiful monument which was unveiled Saturday, June 11, 1904, at 5 o'clock p. m., in the presence of the President of the United States, members of his Cabinet, prominent officers of the army and navy and many distinguished members of the American Medical Association. The handsome bronze statue stands upon the spacious and gently sloping lawn in front of the United States Naval Museum of Hygiene and Medical School at the foot of 23d street. Formerly the seat of the old Naval Observatory. The height of the pedestal is 10 feet. The following inscriptions are engraved on the "bas-relief" panels on the several sides of the pedestal: "Dr. Benjamin Rush, physician and philanthropist, 1745-1813," "Signer of the Declaration of Independence," "First Medical Alienist," "Studium sine calamo somnium."

This eminent American physician was born near Philadelphia in 1745, was graduated at Princeton in 1760, and in medics at Edinburgh in 1768, and practiced his profession in Philadelphia. He was professor of chemistry and later of the theory and practice of medicine in the Medical College of Philadelphia (University of Pennsylvania). He was one of the founders of the College of Physicians and later surgeon general of the Pennsylvania navy. In 1777-8 he was physician general of the military hospital for the middle department, in 1776 he was a member of the Provisional Conference of Philadelphia, and in June of the same year was chosen to the Continental Congress, and was a signer of the Declaration of Independence. He was a member of the committee that reported to the Provisional Conference the expediency of the Declaration and "is supposed to have written the report, much of which was incorporated in that great document." He was also a member of the convention which framed the constitution of 1780, President of the Philadelphia Medical Society for the abolition of slavery, and active member of the American Philosophical Society, of the Philadelphia Bible Society, and Treasurer of the U. S. Mint from 1799 until his death in 1833. He was a prolific writer upon medical and social questions and is said to have left unfinished "A Treatise on the Medicine of the Bible." Among his most important contributions to medical science were his writings in behalf of the insane.

The principal address on the occasion of the unveiling of the monument was by Dr. J. C. Wilson of Philadelphia. President Roosevelt accepted the gift on behalf of the government. Dr. J. H. Musser, President of the American Medical Association, in concluding his remarks, said: "He stands among the first of the giants of the revolutionary and formative periods of our government, one of whom, not only his profession, but all Americans had just reason to be proud." "Stimulated by his thought and deeds, may we so live that for all time we can show by thought and act that in placing this tribute to a scholar, a patriot, a physician in the trust of the nation we are honoring ourselves far more than we can ever honor him." Dr. Wilson said: "Nearly a century has passed since Benjamin Rush was gathered to his fathers. To his contemporaries he was a man not unlike other men, having his virtues and his faults, a good citizen, a skilled physician, kindly courteous, benevolent, and having on occasion much fight in him. He was even known to have some fame in distant lands, chiefly because of a wonderful, clear narrative of the bilious yellow fever of 1793, which he had written. To us, who see him through the vista of one hundred years, he stands, not indeed the most conspicuous figure of a time brilliant with heroic men and deeds, but great among the greatest, and certainly the most striking and impressive figure of the medical life of America at that period, or any period since."

In accepting the gift, President Roosevelt said: "I accept on behalf of the nation the gift so fittingly bestowed by one of the great professions, this statue of a man who was eminent, not only in that profession, but eminent in his service to



Monument to the Memory of **Dr. Benjamin Rush**, erected by the American Medical Association, at Washington, D. C.

By courtesy of Washington Evening Star, Washington, D. C.

the nation as a whole. We have listened to an interesting study of the life of Benjamin Rush, and it must surely have been brought home to each of us here that his career derives its peculiar significance in part from the greatness of his pioneer work as a physician on this continent, in part from the way in which he combined with arduous and incessant labor in his profession the greatest devotion even outside of that profession to the welfare of his fellow countrymen. Here at the National Capital it is earnestly to be hoped that we shall finally see commemorated, as the services of Rush are henceforth to be commemorated by this statute, all the great Americans who, working in widely different lines, by the aggregate of their work make the sum of achievement of America in the world.

I thank and congratulate you of the medical profession today on what you have done, not merely in commemorating the foremost pioneer in your own profession, but in adding at the National Capital a figure to the gallery of great Americans who should be here commemorated.

As you said, Doctor, Benjamin Rush was not a specialist in the modern sense. He could not be. There were not any specialists in the modern sense, as you poitned out. There was no possibility of there being such. But I would like, in this age of specialization, to say one word in the way of a short sermon to eminent specialists. Today no specialist in a democratic country like ours can afford to be so exclusively a specialist as to forget that one thought of duty, namely, his duty to the general public and to the state.

Where government is the duty of all, it of course means that it is the duty of each, and the minute that the average man gets to thinking that government is the duty of somebody else, that minute the republic will begin to go down. It is a fortunate thing for our country that we should have before us the lives of men like Rush, who could take a part in our public life as distinguished as is implied by having been a signer of the Declaration of Independence, and yet do it without a particle of neglect of the man's own proper duties.

I would earnestly plead, in addressing this audience, and especially the members of the high and honorable profession which has given this gift to the nation, that you never for one moment allow yourselves to forget that the well-being of the republic ultimately depends on the way in which, as a rule and habitually, the best citizen of the republic does his duty to the state; and that we have a right not merely to expect but to demand from our hardest worked men, from the leaders of the great professions, the full performance of that public service, which consists in a zealous, intelligent, and fearless performance of the ordinary duties of public life by the ordinary private citizen.

In conclusion, I thank you for having presented to the National Capital, to the people of the United States, the statue of a man who was foremost as a leader and pioneer of his profession, who was a great physician and a great American.

At the annual meeting of the Delaware County Medical Society held on Friday evening, December 2, Dr. F. L. Gage read a paper on "Prophylaxsis in Scarlet Fever," and Dr. J. B. Winhorst reported a case of paralysis of the leg from a gunshot wound of the spine. Dr. G. F. Foster of Olive Green was elected to membership. The following officers were elected: E. M. Hall, president; C. W. Chidester, vicepresident; J. B. Woodworth, secretary; Iradell Rogers, treasurer; Helen M. K. Smith, councilor. The retiring president, Dr. W. B. Hedges, delivered the annual address.

A POST-GRADUATE MEDICAL SCHOOL.—Early in December, last, the Cincinnati Polyclinic and Post-Graduate School of Medicine was opened in Cincinnati in a building at 911 Race street. The faculty is composed of Drs. H. A. Ingalls, Travis Carroll, H. D. Hinckley, F. L. Ratterman, W. E. Kiely, William Gillespit, M. H. Axline, William H. Wenning, Louis J. Krouse, D. I. Wolfstein, O. W. Spark, Th. R. Christen, William C. Harris, A. F. Morgenstern, T. V. Fitzpatrick, C. F. Winton, C. T. Pearce, E. Harlan.

THE CORSET PROHIBITED.—On the ground that the corset is injurious to the health of girls, a society of women in Berlin has petitioned the Prussian Minister of Education to prohibit the wearing of corsets in young ladies' schools.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, December 5, 1904.

G. M. Waters, President. R. T. Tarbell, Secretary.

In the report of cases, Dr. Carlton reported case of attempted abortion by injection. This was discussed by Drs. Baldwin, Kinsman and Stage. Dr. Baldwin presented specimen, first, of tubal pregnancy, which after four years from the time of the rupture, lighted up again and outside an abscess formed. Second case, woman sixty-two years old, cystic tumor, where he did supra vaginal hysterectomy and double oophorectomy. Third, monstrosity pair of twins, bodies being joined at sternum, syncephalus monoprosopus. Dr. Deuschle's paper Obscession was discussed by Drs. Rutter, Stockton, Kinsman and Tarbell. Dr. C. S. Means' paper, Hypertrophied Tonsils, was discussed by Drs. Linhart, Blake and Kinsman.

On motion of Dr. Blake the executive committee was empowered to act for the arrangement of place and time for holding annual meeting.

Annual Meeting, December 19, 1904.

The annual meeting of the Columbus Academy of Medicine was held at the Neil House, December 19, 1904.

After the banquet the members adjourned to the assembly room and voted for the election of officers for the ensuing year. The result of the election was as follows:

President, Dr. F. F. Lawrence; Vicepresident, Dr. J. D. Dunham; Secretary, Dr. Chas. J. Shepard; Treasurer, Dr. Wm. C. Davis; Delegates to State Association, Dr. G. M. Waters and Dr. Wm. D. Deuschle; Members of Board of Censors, Dr. Charles S. Hamilton and Dr. Charles F. Clark.

The election of officers having been finished the president announced the postponement of program until next meeting.

Dr. Blake introduced the following resolution:

Whereas, There has been much public discussion concerning the presence of rabies in the county,

Resolved, That the president appoint a committee of three to investigate nature and extent of rabies in this city.

This resolution was adopted and the president appointed the following: Drs. Rutter, Scott, and Dunham, as such committee.

Regular Meeting, January 2, 1905.

F. F. Lawrence, President. J. C. Shepherd, Secretary.

Members present: Drs. Loving, G. W. Rogers, Clemmer, Fullerton, Fulton, Platter, Ranchous, Dresbach, Rutter, Probst, Phillips, Thomas, Palmer, Timberman, Tarbell, Kinsell, Frame. Goodman, Waters, Courtwright, Evans, Wolfe, Barnhill, Wardlow, W. J. Means, Carter, McGavran, and Warner.

Papers on Causation, Prevention, and Treatment of Tuberculosis were read by Drs. Spohr, Clemmer, and Probst, and discussed by Drs. Loving, Warner and Fullerton.

The following amendment to constitution was presented by Dr. Waters: Amend Section 1, Article 9, by adding "Press;" insert after Section 4 and make the insertion Section 5. The duties of the press committee shall be to arrange for publication a full report of each meeting to be published in the COLUMBUS MEDICAL JOURNAL and in the Journal of the American Medical Association and to furnish the daily papers of the city with such items as may be of public interest or may inure to the good of the Academy.

Drs. D. J. Sanor and F. M. Kent were elected to membership, and the petitions of Drs. O. E. Kline and R. A. Rice were read and referred to the Board of Censors.

The above data was furnished by Dr. Charles J. Shepard, secretary.

President appointed the following committees for the ensuing year: Executive, Drs. Waters, Blake, and Teachnor; Public Health, Drs. Platter, McKendree Smith, and Spohr; Legislative, Drs. Winders, W. J. Means, and Timberman; Press, Drs. Tarbell, J. E. Brown, and Charles J. Shepard, secretary.

JOINT MEETING OF THE BUTLER AND WARREN COUNTY SOCIETIES.

Joint medical meeting of Butler and Warren County Societies was held at Franklin, Ohio, January 3, 1905.

"The Need and Uses of a Physician to Teach Hygiene in Educational Institutions" was the subject of a paper by Dr. H. M. Moore, Oxford. It was discussed by Dr. D. A. Williams, Franklin; Dr. A. C. Roberts, Morrow; Dr. A. W. ardis, Lebanon. "County Infirmaries," by Dr. Herschel Fisher, Lebanon, was discussed by Dr. Mark Millikin, Hamilton; Dr. W. S. Reed, Hamilton.

Dr. Dan Millikin, Hamilton, delivered a very interesting address on "The Curse of Genius." A "Symposium on Pneumonia" drew out interesting talks from several members.

Presidents, Dr. A. L. Smedley, Dr. E. S. Stevens. Secretaries, Dr. Mark Millikin, Dr. T. E. Keelor.

A social hour, including gastric tests at Elite Hotel, concluded a most interesting and profitable meeting.

THE COLUMBUS MEDICAL JOURNAL.

A MONTHLY MAGAZINE OF MEDICINE AND SURGERY.

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JANUARY, 1905.

Editorial.

SANITARY CONDITION OF THE OHIO PENITENTIARY.

The sanitary condition of the Ohio Penitentiary has long been a matter of comment. It has been rendered worse by the growth of the city, especially of manufacturing interests in the vicinity of the penitentiary. The fact that it is located on low ground has made it more difficult to properly drain and keep in sanitary condition. We are glad to know that the State Board of Health ordered an investigation of the sanitary conditions existing at the penitentiary and that the committee appointed for that purpose has made a very exhaustive examination and reports the condition together with suggestions as to the best methods of improving the existing conditions. Dr. Frank Warner, a member of the Board and C. C. Probst, Secretary, were appointed to conduct the investigation. Much of the practical part of which was carried out by Prof. Elmer

G. Horton and his assistant in the laboratory, and the late Mr. B. H. Flynn, then engineer of the Board. The report says: "The location is bad, being upon low wet ground. The buildings are mostly old and badly planned, from a sanitary standpoint. The old cell blocks are excessively cramped, dark and ill ventilated. Much of the plumbing is old, in bad repair, and can hardly be kept in a cleanly condition. It is questionable whether it would be wise or economical to attempt to place the prison in a proper sanitary condition. Certainly, aside from financial conditions, there is good reason to advise the abandonment of the entire plant and the construction of a new prison at some other site. Having regard only for the health of the inmates, the Board would recommend that this be done. And in considering this, projects it should be held in mind that the prison revenues depend very largely upon the health of the prisoners. In the industrial world it has been found profitable to consider the sanitary conditions under which men work. No one would dispute this for beasts of burden and it should hold true for men in prison required to perform daily labor. Certain improvements in sanitary conditions could be made without delay. Foul water-closets may be kept clean, though radical changes in plumbing may be required in some places to insure perfect conditions. Light is essential to health, and weekly cleaning of windows would much improve present conditions. Electric lighting, substituted for gas, would render the atmosphere less impure and afford better light for work in dark places. In some shops, notably in the state shop and tobacco shops, there is great overcrowding. This latter employment at best, is detrimental to health, and must be greatly so under conditions existing at the penitentiary. Other shops are constantly filled with dust, mineral dust for most of them, which is most injurious to the lungs and notoriously provocative of tuberculosis. Dust removing machinery would greatly reduce this danger. These should be required.

As will be seen from mortality tables appended, a large number of the inmates die from consumption. During the ten years and four months, ending April 31, 1904, there were 335 deaths among prisoners, omitting deaths from execution and suicide. The average prison population during this time was

2010. This gives a death rate of 16.67 per thousand per annum, which, considering age periods, is quite high. One hundred and twenty-one of these deaths were from consumption; that is 36.1 per cent. of the deaths from all causes was from consumption. The difference in age periods between prisoners (mostly under 20 years) and the general population should be borne in mind. Many prisoners have tuberculosis on leaving the prison, and a not inconsiderable number who were dying of the disease have been pardoned on that account. On the other hand quite a large number have tuberculosis at the time of entering the prison. Thus of the 121 who died in prison of tuberculosis, 39 died within less than one year and 37 within less than two years after entering. The conditions at the penitentiary are most favorable for the development and spread of tuberculosis. The poor ventilation, the overcrowding, the absence of light, and the dust producing occupations, all favor it. It will be noted from the table that in most cases the consumptives were admitted to the hospital but a short time—some only a few days, before death. This meant many opportunities for infection. No special precautions are taken to guard against this danger. There is no care of sputum outside of the hospital and no disinfection of cells, bedding, etc., used by consumptive prisoners. Tuberculosis was completely wiped out of the Minnesota state prison by a system of isolation, special diet, etc. It seems highly probable that this disease could be. at least much reduced in the Ohio institution.

In conclusion the Board would recommend:

(a). The abandonment of the present site of the Ohio penitentiary and the rebuilding of a modern institution planned with due regard for the health of the prisoners.

(b). That in the meantime remedial effects receive attention, such as broken or bad plumbing, poor ventilation, especially in the old cell blocks and hospital; insufficient light, unnecessary dust contamination of the atmosphere in grinding rooms, overcrowding, principally in the tobacco shops, and the protection of well prisoners against infection from consumption."

With the Ohio Sanitary Bulletin we express hope that the Board's recommendation to abandon the old prison and build a new one will be seriously considered by the next General Assembly.

LEWIS S. M'MURTRY, PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.

Dr. Lewis S. McMurtry, President of the American Medical Association, was born in 1852 in Kentucky. He was graduated at the age of nineteen at Center College, Danville, Ky., and three years later received the degree of A. M. After graduating in medicine from Tulane University of Louisiana, he served a year as one of the chiefs of clinics at Danville, Ky., and while there was elected to the chair of anatomy in the Kentucky School of Medicine, at Louisville, removing to the latter city in 1889. He pursued post-graduate studies at various times, in New York and Philadelphia and in Europe, devoting himself to gynecology and abdominal surgery.

For ten years past he has been professor of gynecology and abdominal surgery in the Hospital College of Medicine in Louisville and is surgeon to Sts. Mary and Elizabeth Hospitals, Louisville City Hospital, "and was president of the Kentucky State Medical Society in 1889, and was chairman of the committee which erected a monument to the memory of Ephraim McDowell, the father of ovariotomy. He was president of the Southern Surgical and Gynecological Association in 1891, and of the American Association of Obstetricians, in 1893. He has been an active member of the American Medical Association ever since his graduation in medicine, and was a member of the first Board of Trustees, rendering efficient service in founding and establishing the Journal."

Dr. McMurtry contributed the chapter on the Surgery of the Uterus to the International Text-book of Surgery, and several articles to Dr. Reed's Text-book on gynecology. He is a member of many medical societies and one of the founders of the International Congress of Gynecology and Obstetrics.

THE PORTLAND MEETING.

The medical profession of Portland, Ore., has been active in its preparation for the coming meeting of the American Medical Association which is to be held there July 11-14, 1905, Dr.

K. A. J. MacKenzie, chairman of arrangements. We are assured that no pains will be spared to make the meeting a great success. Ample hotel accommodations are being provided and the entertainment will be in keeping with the boundless resources of that great state. The date was decided after considerable deliberation. As stated by the Journal of Association, "the holiday season for the majority of medical men is from about the first week in July to September, and the schools have by that time all closed. Most of those who live in the East will want to utilize the trip to the association meeting as their summer vacation, and if the date were that usually adopted for the association meeting, these would not be able to attend. In July Portland has a delightful climate, and consequently there need be no fear of hot weather." The Committee on Arrangement for the meeting consists of Drs. K. A. J. MacKenzie, A. C. Smith, J. F. Wilson, Wm. Jones, Henry Waldo Coe, A. J. Giesy and E. F. Tucker. The committee is holding weekly meetings and is planning to take care of 3,500 visitors and more, it is said, if they come. Dr. H. W. Coe is chairman of the Committee on Finances which expects to raise $20,000 for entertainment. They already have large subscriptions which indicates that there will be no difficulty in raising this amount. The preliminary reports from the sub-committees on meeting places and on hotels indicate that the Portland profession is alive to the needs of the occasion and determined to make the meeting a great success.

The auditorium on the grounds of the exposition opening from the street outside has been secured for the general meetings. This building has a seating capacity of 3,000 and arrangements are now being made for subdividing it into meeting places for some of the sections. An Inside Inn under the same management as the one at the World's Fair at St. Louis is to be constructed on the Lewis and Clark Fair Grounds, with at least 1000 rooms and the capacity of 1500 guests, so that it seems evident that there will be an abundance "of comfortable accommodations" as the Medical Sentinel puts it, "in the finest summer climate in the world."

Medical News Notes.

Conan Doyle says "that for a man who has mastered Gray's Anatomy life has no future terrors."

Dr. J. A. Murphy, County Coroner of Franklin county, had his automobile destroyed by fire on the 4th inst.

DR. SHRADY RETIRES.—After more than forty years' service as editor of the New York Medical Record, Dr. G. F. Shrady has resigned.

TOLEDO POST-GRADUATE SCHOOL.—A medical school under this title has been incorporated at Toledo by Drs. H. E. Noble, A. D. Hobart, A. C. White, Albert Forsuch and A. G. Snyder.

ROCKEFELLER LABORATORY.—The bacteriologic laboratory for the Rockefeller Institute is now in the course of construction. The endowment now amounts to $1,200,000. The new building, a frontage of 100 feet, and five stories in height, is to be of "light brick with limestone trimmings, and will cost $325,000."

TO THE AMERICAN PUBLIC HEALTH ASSOCIATION.—A party of Ohio physicians left on January 3d for Havana, Cuba, to attend the meeting of the American Public Health Association. Those who started from Columbus were Dr. C. O. Probst, secretary of the state board of health; Dr. Chapman, member of the board, and Dr. H. A. Tobey, superintendent of the Toledo **Hospital, and Dr. H. C. Eyeman, superintendent of the Massillon** Hospital. They go by rail to Tampa, Fla.

We desire to express our thanks to Dr. C. E. Blacker for twenty-eight volumes of the COLUMBUS MEDICAL JOURNAL. We still would like to secure the following JOURNALS: Vol. 3, No. 1; Vol. 4, Nos. 6, 7, 8, 9, 11, 12; Vol. 5, Nos. 1, 3, 4, 5, 7, 8, and 11; Vol. 6, No. 2; Vol. 11, No. 6; Vol. 12, No. 3; Vol. 13, No. 3; Vol. 14, No. 5 and 10; Vol. 16, No. 9; Vol. 17, No. 5; Vol. 18, Nos. 3, 9, and 11; Vol. 19, No. 4; Vol. 20, No. 2; Vol. 21, No. 10; Vol. 24, No. 6; Vol. 26, Nos. 7, 8, 10, and 12; Vols. 27, 28, 29, 30, 31, 32, 33, 34.

Dr. John Punton, Superintendent of the Punton Sanitarium, or Home for Nervous Invalids, at Kansas City, Mo., is adding a large addition to the sanitarium building in response to an increased demand for accommodations by patients. There is also being built a large extension to the verandas, which will be used bv the guests for places of recreation. The management of the sanitarium appreciates the support received from the medical profession and has great confidence in the continued success of the institution.

Recent Medical Books.

VON BERGMANN'S SURGERY. A System of Practical Surgery. Drs. E. von Bergmann, of Berlin, P. von Bruns, of Tübingen and J. von Mikulicz, of Breslau. Edited by William T. Bull, M. D., Professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York. Complete work now ready, in five imperial octavo volumes, containing 4220 pages, 1976 engravings and 102 full-page plates in colors and monochrome. Sold by subscription only. Per volume, cloth, $6.00; leather, $7.00; half morocco, $8.50, net. Volume V just ready. 789 pages, 354 engravings, 23 plates. Lea Brothers & Co., Publishers, Philadelphia and New York.

This volume completes the most important System of Surgery that has recently appeared. It is based upon the second German edition, carefully revised and brought thoroughly up to date. The translation and revision has been done by Dr. Bull and his collaborators with great fidelity and thoroughness. They have brought to their work not only enthusiasm and faithful effort, but also wide surgical experience which enabled them to add judicious and helpful references to methods of practice which have gained the preference of English and American surgeons. The work is encyclopedic in character, many of its chapters exceeding in scope and detail special treatises which have been published on their subjects. The following brief outline will give some idea of the scope of the several volumes:

Volume I.—936 pages, with 361 engravings and 18 plates—covers the following subjects: Injuries and Diseases of the Skull and its Contents; Malformations, Injuries and Diseases of the Ear; of the Face (including Plastic Operations and the Neuralgias of the Head); of the Salivary Glands (including Anomalies); of the Jaw; of the Nose and its Adjacent Tissues; of the Mouth and of the Pharnvx.

Volume II.—820 pages, with 321 engravings and 24 plates—Malformations, Injuries and Diseases of the Neck, Larnyx, Trachea, Mammary Gland, Vertebral Column, the Thyroid Gland, the Thorax and its contents, the Spinal Cord, etc.

Volume III.—918 pages, 595 engravings and 21 plates—Malformations, Injuries and Diseases of the Shoulders and Upper Arm, Elbow, Fore-Arm, Wrist, Hand, Hip, Thigh, Knee, Leg, Ankle, Foot, etc.

Volume IV.—757 pages, 345 engravings and 16 plates—Malformations, Injuries and Diseases of the Œsophagus, Stomach and Intestines; Injuries and Diseases of the Abdominal

Wall, the Peritoneum, the Liver and Biliary Passages, the Spleen and Pancreas; Hernia; Laparotomy.

Volume V.—789 pages, 354 engravings and 23 plates—Malformations, Injuries and Diseases of the Pelvis, the Anus and Rectum, the Urethra, the Penis. Abnormalities, Injuries and Diseases of the Kidneys and Ureter, the Bladder and Prostate, the Scrotum, Testicles, Vas Deferns and Seminal Vesicle, etc.

The complete work, bound in handsome octavo volumes, containing 4,220 pages, 1,976 engravings and 102 full-page plates in colors and monochrone. The great value of the work lies in its practical and clinical character. This is supported by an abundance of pathological data, details of original research, and statistical facts which render the work of inestimable value to the student, the surgeon and the general practitioner. These five volumes constitute a complete working library on Surgery. Every surgeon, as well as every physician who has occasional surgery to perform, owes it to himself and to his patients to add this work to his library.

LECTURES TO GENERAL PRACTITIONERS on the Diseases of the Stomach and Intestines, as well as the Allied and Resultant Conditions, with Modern Methods of Diagnosis and Treatment. By Boardman Reed, M. D., Philadenphia, Pa. Publishers, E. B. Treat & Co., New York.

This octavo volume of 1024 pages embraces a full account of the simplest and least methods of determining the character of the motor secretory and excretory work of the principal organs having a part in the processes of digestion and metabolism, by examinations of the stomach contents, feces, blood, urine, etc.; together with a full exposition of the subject of diet and the therapeutics of the digestive disorders in general, including indications of the various forms of electricity, x-ray, massage, vibratory stimulation, hydrotherapy, gymnastics, liquid medication, medical and surgical treatment, etc., in addition to "The Gastro-intestinal Clinic," in which the diagnosis and treatment of all the known diseases of the tract are separately considered. It can be stated confidentially that Dr. Reed's book is better adapted to the needs of the general practitioner than any similar work old or new. The importance of rightly understanding the newer methods in the diagnosis and treatment of gastro-intestinal diseases is self-evident.

Dr. Reed and his publishers have made it possible in a single volume, and at a less price than must be paid for other works covering the same diseases, to give the profession all the newer methods of diagnosis and treatment of gastro-intestinal diseases. We consider this combination in one volume has a decided advantage over other works.

A Text-Book of Clinical Diagnosis. By Laboratory Methods. For the use of Students, Practitioners, and Laboratory Workers. By L. Napoleon Boston, A. M., M. D., Associate in Medicine and Director of the Clinical Laboratories of the Medico-Chirurgical College, Philadelphia; formerly Bacteriologist at the Philadelphia Hospital and at the Ayer Clinical Laboratory of the Pennsylvania Hospital. Octavo volume of 47 pages, with 320 illustrations, many of then in colors. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth, $4.00, net; Sheep or Half Morocca, $5.00.

Dr. Boston here presents a practical manual of those clinical laboratory methods which furnish a guide to correct diagnosis, giving only such methods, however, that can be carried out by the busy practitioner in his office as well as by the student in the laboratory. He has given special attention to outlining in progressive steps the various procedures in clinical technic, such steps being illustrated whenever possible. All the more recent methods for the examination and staining of blood are described and illustrated by original drawings, and the subject of Serum-Diagnosis is very carefully considered. The newer methods for the estimation of Sugar, Bence-Jones' Albumin, Uric Acid, and Purin have received thoughtful consideration. The subjects of Animal Parasites, Diseases of the Skin Transudates and Exudates, and Secretions of the Eye and Ear have received an unusual amount of space. Attention has also been paid to Inoscopy and Cyto-diagnosis. Indeed the book contains much useful material throughout, and being the latest work on Clinical Diagnosis, includes the most recent advances along that line.

Practical Dietetics. Diet in Health and Disease. By A. L. Benedict, Buffalo, New York, Member American Gastro-Enterological Association, Medical Society State of New York, etc. 12 mo. 400 pabes. Green Buckram, Gilt Side Title and Top. $1.50 net. Chicago: G. P. Englehard & Company.

The subject Dietetics is one that appeals to the physician as an important branch of therapeutics. This volume omits the technical culinary directions and presents mainly the underlying principles and facts upon which the adequate and properly guarded nourishment of the body depends, whether in health or in disease. The reader will find it practical along this line.

HAND-BOOK OF THE ANATOMY AND DISEASES OF THE EYE AND EAR. For Students and Practitioners. By D. B. St. John Roosa, M. D., LL. D., Professor of Diseases of the Eye and Ear in the New York Post-graduate Medical School; formerly President of the New York Academy of Medicine, etc., and A. Edward Davis, A. M., M. D., Professor of Diseases of the Eye in the New York Post-graduate Medical School; Fellow of the New York Academy of Medicine. 300 Pages, Square, 12 mo. Price, Cloth, $1.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadenphia, Pa.

This book does not contain a large number of pages, but exhibits the present state of Ophthalmology and Otology in sufficient proportions to make an exact and reliable guide as to the principles of treatment of the diseases of the eye and ear, and to the anatomy of these organs. The authors have taken great pains to see that not only the well established views of the nature and treatment of Ophthalmic and Aural disease have been presented, but also those that are on trial while such as have been abandoned receive scanty or no attention. A very full and complete index has been added to facilitate quick reference.

BOSTON MEDICAL LIBRARY MAR 19 1906

BLOOD PRESSURE as affecting Heart, Brain, Kidneys, and General Circulation, A practical consideration of theory and treatment by Louis Faugeres Bishop, A. M., M. D., New York City, N. Y. Publishers, E. B. Trent & Co., 241 W. 23d St., New York City, N. Y. 1904.

The author of this monograph gives several reasons in justification of its publication. One of them is that he considers an over respect in these days for so called scientific work too pronounced, wrongly limiting the term to that which is in some way connected with a laboratory and apparatus and not from actual bedside experience. He treats the subject from its various clinical phases and draws his conclusions from actual results.

HARE'S PRACTICAL THERAPEUTICS. A Text-Book of Practical Therapeutics; With Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. de Schweinitz, Edward Martin and Barton C. Hirst. New (10th) edition, much enlarged, thoroughly revised and largely re-written. Octavo, 908 pages, with 113 engravings and 4 full-page colored plates. Cloth, $4.00, net; leather, $5.00, net; half morocco, $5.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1904.

This is the most convenient, comprehensive, trustworthy and by far the most widely used work on Therapeutics ever published, requires no introduction to the medical profession or the student world. The demand which has necessitated in a little more than a decade, ten editions and three times as many printings is readily understood upon an examination of the volume.

Every new edition means a complete revision, which in the present issue has been so thorough that the entire work has been reset in new type. Every discovery of worth, every really useful new remedy or method of treatment is clearly set down with telling illustrations wherever needed. Hare's Practical Therapeutics has come to be synonymous with up-to-date knowledge of treatment, medicinal or otherwise.

THE PRINCIPLES AND PRACTICE OF GYNECOLOGY for students and practitioners, by E. C. Dudley, A. M., M. D., Fourth edition, revised. With 419 illustrations and monochrone of which 18 are full page plates. Lea Bros. & Co., Philadelphia, Publishers. 1904.

The author in his preface to the fourth edition, says, "that he has endeavored to make a thoroughgoing revision which does not include the recent advances in Gynecology and in doing so he has rewritten and rearranged and condensed many chapters and in this way has found considerable space for new matter without enlarging the volume." The sections relating to General Diagnosis, Local Treatment, Major Operations, Drainage, Urethritis, Cystitis, Ovarian Tumers, Embryology, Malformations, and the Treatment of Salpingitis, Ovaritis and Pelvic Peritonitis have been subjected to special revision and to a great extent have been rewritten with practical additions. The most noticeable improvements in the book are the illustrations. Most of these are new and of his own drawings, especially made for the book. All the minor and major manipulations and operations have been illustrated to show the several procedures as they take place step by step, each operation being set forth in a series of drawings; for example, 12 drawings describe the steps of hyeteromyomectomy and 32 explain perineal lacerations and the steps of perineorrhaphy.

DWIGHT'S EPITOME OF TOXICOLOGY. A Manual for Students and Practitioners. By E. W. Dwight, M. D., Instructor in Legal Medicine, Harvard University. In one 12mo volume of 298 pages. Cloth, $1.00, net. Lea's Series of Medical Epitomes. Edited by V. C. Pedersen, M. D. Lea Brothers & Co., Publishers, Philadelphia and New York, 1904.

This little volume is an epitome covering the essentials of toxicology. Some idea of the thoroughness with which the subject is covered may be obtained from the following brief of contents. After a section on the general principles of toxicology the subjects are taken up as follows: Irritant Poisons; Specific Irritants; Poisonous Foods; Cerebral Neurotics; Spinal and Cerebro-spinal Neurotics; Depressants; Asthenics; Ptomains. etc.

A COMPEND OF MEDICAL LATIN, designed expressly for elementary training of medical students, by W. T. St. Clair, A. M., professor of the Latin language and literature in the Male High School of Louisville, Ky.; Author of Caesar for Beginners, etc. Second edition, revised. P. Blakiston's Son & Co., Philadelphia, Pa. 1904.

The author's aim in publishing this little book, is to present to the student of medicine, in a plain and practical way, the fundamental principles upon which the medical language is built. Students will find it of considerable help and convenience in their work.

APPENDICITIS AND OTHER DISEASES ABOUT THE APPENDIX, by Bayard Holmes, B. S., M. D., Professor of Surgery in the University of Illinois, Professor of Clinical Surgery in the American Medical Missionary College, Chicago, Attending Surgeon at the Chicago Baptist Hospital. Publishers, D. Appleton & Co., New York City, N. Y. 1904.

This is a very interesting and useful book. The author presents a careful scientific study of the appendix. In chapter II. he discusses the Historic Notes; Definition; Terminology; Appendicitis as an Entity; The Retention Cyst. Anatomic Consideration; Clinical Consideration; Neglected Appendicitis; The Spread of Infection. In chapter III. he discusses Obscure Forms of Appendicitis. Chapted IV. the Symptomatology; Chapter V., Course and So-called Complications; Chapted VI., Diagnosis and Differential Diagnosis; Chapter VII., Treatment. Other subjects treated of are Peritonitis, Intussusception, Perforated Typhoid Ulcer and Carcinoma of the Intestinal Tract. The physician will find it very interesting reading.

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"ANGINA PECTORIS."*

HENSON M. HAZELTON, M. D., LANCASTER, OHIO.

Angina pectoris, in its typical form, is a very rare disease. Pseudo-angina, or what resembles it at times, cardiac asthma, is not infrequent. It does not fall to the lot of many physicians to witness an attack of true angina pectoris, and when it does the agony and the mental suffering of his patient can scarcely be forgotten by him. There are two chief elements that go to mak up the symptomatology of the paroxysm. First, the pain, and second, the indescribable feeling of anguish and sense of imminent dissolution. The resources of the language have been taxed to describe the pain of this disease. Patients speak of it as though the heart was in the grasp of a mailed hand and having it gradually tightened around it. Others describe the sensation as though some enormous weight was pressing the breast bone against the spine, or as though the whole chest was in the grip of some monster vise. Others speak of the breast pang as that of a stabbing character and describe the pains as though the heart was transfixed by some sharp instrument. In true angina the pain is very characteristic and marked by great intensity. When a true. anginal attack occurs if the patient be walking or exercising in any manner, he stops immediately, holds himself as quiet as possible and grasps the nearest object that will give him support. So great is his distress at times during the attack that the muscles of respiration scarcely move, and indeed breathing comes almost to a standstill for a while at least. The ocalitv of the pain in true angina is of much significance. Most frequently it is situated over the precardial region. Oftentimes it is felt in the upper part of the chest or again it may radiate through the chest and be even felt in the back or in the left shoulder joint. At times the radiation of the pain extends to the left arm and can also be felt in the forearm and the ring and little fingers of the left hand. No matter where the radiation of true angina may extend or in what region of the chest it may be felt or how active the imagination of the patient in describing it, we know it is of a frightful sort and quite unlike anything with which we are familiar. The mental anguish these patients suffer is almost indescribable. Latham, who was the first to distinguish this mental element, says: "The suffering is as sharp as anything that can be conceived in the nature of pain and that it includes moreover something which is beyond the nature of pain—a sense of dying." During the attack the patient's countenance has that gray, ashy, ghastly and drawn look which once seen leaves an indelible impression upon him who observes it. Together with this pallor there is extreme weakness and a faint feeling which soon overwhelms the individual who is attacked. The pulse is small, feeble and irregular, as though the poorly acting heart could not send the blood to the extremities. During the attack when it is severe, perspiration will flow almost constantly from the patient. His face, neck and hands may be covered with it. It is cold and clammy and lends additional significance to the gravity of the other symptoms. He looks haggard and exhausted and as though every moment would be his last, and indeed it is a trying time for the vital powers to sustain the spark of life that still survives in his body. Frequently an attack terminates by a sudden explosion of gas from the stomach or an intense desire to urinate. The duration of an attack of true angina is very short, so much so that when we are called to see a patient suffering with it he is over it oftentimes before we arrive on the scene. Other cases are more prolonged and may last several hours and almost end the patient's existence before they cease. Among the causes which act efficiently in bringing on the phenomenon of attack are primarily exertion, and any exertion whether accompanied with little or great effort is liable to bring it about. They who are affected with this disease are eized while walking and especially when it is up hill or against a cold cutting wind. Even an attempt to move in bed or assume the sitting posture, or such slight exertion as stooping to lace the shoes, according to Osler, has been known to produce a paroxysm. In subjects predisposed to this disease, any muscular exertion which calls for increased heart action is liable to bring on an attack of angina pectoris. Mental emotion is another well known exciting cause of this phenomena. This has never been better described than by the renowned John Hunter, who himself was a sufferer from angina. He says his life was in the hands of any rascal who chose to annoy or tease him. Cold is another frequent exciting cause, particularly in the vaso-motor form, the mere sitting by an open window on a cold day or the retiring between cold sheets at bedtime are oftentimes sufficient cause in these patients to precipitate an attack. The conditions of the heart associated with angina pectoris and which enter largely into its causation are varied. We sometimes find it with affections of the aortic valve. An adherent pericardium associated with aortic valvular trouble is sometimes the dominant factor in the causation of angina. Fatty degeneration of the heart structure with an accompanying aortitis and diseased corinary arteries is often the condition found postmortem in angina subjects. The autopsy often reveals a fibrous myocarditis, and so frequently is this found in these cases of angina that Gibson says it is a surprise not to find it. Another concurrent condition with angina is an arterial degeneration especially in the nature of an arterio-sclerosis. During life the arteries are stiff and thick and after death we find the coronaries almost calcified. The most important factor in the causation of angina is the fact that too great stress is put upon the heart to which it is unequal for the moment, and the main cause of this stress is resistance of peripheral circulation or habitual high arterial tension. The question of diagnosis of angina is sometimes not an easy task. It may be simulated by various paroxysms of pain that are not of the heart and that are not attended with any danger whatever. Age, sex, appearance of the patient and circumstances under which the early attacks come on are the chief helps that throw light upon the diagnosis of this affection. Rarely do we have true angina before forty-five years of age unless there be some great myocardial changes. So rare is it before this age that Belfour classifies it among the senile affections of the heart.

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* Read before the Tenth District Medical Association, November 15, 1904, at Columbus, Ohio.

The first attack in true angina most always follow some form of exertion and rarely do they come on when the patient is quiet and in repose. This is more true of pseudo-angina or cardiac asthma. The prognosis of true angina is often uncertain, and yet we have certain conditions which guide us to make it correct. We should eliminate carefully the factors often producing it. On the one hand, degenerated heart walls; on the other, vascular changes. If there be high arterial tension with evidences of vigorous heart tone we may hope by proper treatment to modify this condition for at least a while. But on the other hand if there be evidences of much myocardial change such as is marked by a slow imperceptible pulse with very low arterial tension these should give us great anxiety by reason of the vagueness and uncertainty of the condition which may be present and at any time become dangerous. Again, if over-exertion or excitement bring on the attacks or if flatulent dyspepsia be a factor in their causation, we should try to avoid with care and treatment their natural outcome. It is at times difficult to make anything like a sure forecast as to the outcome of an attack, as we are never sure when the next one will come or whether it may be the last. But when there is pronounced cardiac, arterial and renal changes our prognosis should always be guarded and the future of the patient must appear dark and imminent. The treatment of angina will depend a great deal upon what are the apparent and obvious causes. Oftentimes this will be difficult of determining accurately and our treatment must be essentially empirical. First of all we must look to the general health of the patient, and from this point of view the treatment will be largely hygienic. The patient should have proper guidance in regard to the amount of exercise that should be taken. He should be cautioned against walking in a cold wind or being out in weather that is subject to rapid changes. He should be instructed not to make a hasty effort to catch a car or over-exert himself in climbing hills or stairways. He should be coached as to the regulation of his diet and particularly instructed to refrain from eating heavy meals at bedtime. We must enjoin rest upon these patients and especially if an attack has recently occurred. Then we should insist upon them remaining in bed for at least a week. We must study the dispositions and the habit of our patient and be a guide to him whenever it is necessary. We must exercise tact and good judgment in the management of patients subject to angina that this terrible paroxysm of pain be avoided and our patients saved from a torture that is equal to death itself. The medical part of the treatment resolves itself first into means for relief of the pain of the paroxysm, and secondly, the use of remedies which will improve the condition of the heart and thereby lessen the frequency of the attacks. Paramount among the remedies for the relief of the pain is that of nitroglycerine given in doses large enough to produce the desired effect. Amyl nitrite also has an important place in relieving the pain of angina attacks. Patients subject to these attacks should always have these remedies with them and at the first warning should take them in the hope of warding it off. In some cases the use of the nitrites will fail to relieve the pain and spasm, and we are then compelled to fall back upon the use of stimulants such as ammonia, brandy, ether, chloroform, camphorated oil and others. While the paroxysms of pain are easily and readily relieved by these drugs there are cases in which the pain still persists and we must resort to the use of morphine and atropine hypodermically. The initial dose of this should be small, but if the pain still persists we should use it boldly until we get results. Hot and stimulating applications over the precordia, such as a strong mustard poultice or turpentine stupe, are appropriate, as are also heat and friction to the extremities. Drugs that have been useful in remedying the existing conditions of the heart and lessening the frequency of the attacks are principally the iodides. Iodide of potassium or sodium given continuously for several weeks or months will make life indeed more comfortable for the patient. A mercurial, followed by a saline purge once or twice weekly will lower arterial pressure and have a tendency to lessen the attacks. Occasionally arsenic combined with iodide of potassium and nuxvomica is useful where arterial tension is not too high.

In conclusion, we must remember that we are dealing with an incurable ailment and that our only hope is to alleviate the suffering of an immediate attack and prolong the time when another will come, thus making easy and more comfortable the life of our patient.

SPECIAL TOPOGRAPHY OF THE URETER AND TRACTUS NERVOSA.

BY BYRON ROBINSON, B. S., M. D., CHICAGO.

The importance of the topographic relation of the ureter and nervous system is from the standpoint of diagnosis, of reflexes or referred pain, of excessive peristalsis in the ureter with its transmission to other visceral tracts as the tractus genitalis, intestinalis, vascularius or respiratorius and radiation of pain from the ureter over definite nerves and nerve regions. It may be remembered that the sympathetic nerve system with its delicately poised arrangements and function over the viscera proceeded perfectly unless deranged. If the urinal stream or a ureteral rhythm is defective, disordered peristalsis, absorption and secretion will arise in the viscera from reflexes. In the topographic relations of the ureter to be general nervous system discrimination must be be made as regards the sympathetic and cerebro-spinal systems.

THE SYMPATHETIC NERVE SUPPLY OF THE URETER.

The sympathetic nervous system dominates the ureter in its function of peristalsis absorption and secretion. In disease the sympathetic system produces periodic rhythmical pain of the calicky character affecting especially the tractus vascularis inducing changed vessels, peristalsis, as pain and rapid pulse. Ureteral colic which arises and subsides in the sympathetic system affects the tractus intestinalis inducing irregular peristalsis, vomiting and evacuations. Ureteral colic, i. e., disordered, wild or irregular ureteral peristalsis induces irregular, deficient or excessive perspiration. Ureteral colic produces excessive deficient or irregular respiration by passing to the abdominal brain (ganglion coeliacum) whence it becomes reorganized and emitted to the cervical ganglion where it is again recognized and transmitted over the phrenic nerve to the diaphragm. All visceral tracts—tractus intestinalis, genitalis, lymphaticus, vascularis, and respiratorius and perspiratorius—are distinctly connected and related to the sympathetic nervous system through the central ganglion, the abdominal brain, ganglion celiacum by nerve plexuses as its nerve branches radiate to all viscera. Hence any irritation produced in one visceral tract will be transmitted to all other visceral tracts deranging the functions and inducing excessive, deficient or irregular peristalsis absorption and secretion. For example a ureteral calculus causing ureter al colic (excessive, deficient or irregular ureteral peristalsis) will induce pain, colic, vomiting (deranged peristalsis in the tractus intestinalis) as well as constipation, indigestion (deranged absorption and secretion of the tractus intestinalis). If the ureteral calculus induces such manifest symptoms (pain, colic, vomiting, constipation, indigestion) in the tractus intestinalis, it also produces relatively similar effects on all other visceral tracts. The excessive, deficient, or irregulalr peristalsis, absorption and secretion caused by the ureteral colic on other visceral tracts as the tractus vascularis, lymphaticus, respiratorius, perspiratorius, and genitalis, is not so evident, not so manifest and more or less overlooked but the effect remains. I propose therefor to expose the relation of the ureter to the gross (dissectable) sympathetic nervous system in order to draw conclusions for utility in diagnosis.

A careful dissection of the ureter demonstrates that its sympathetic system of nerves is conducted to it with its vessels (blood and lmph). Hence the most extensive nerve supply to the ureter will be found at its junction with the largest blood vessels and this occurs at its proximal end—at the calcyces and pelvis from the renal artery; at its distal end by the uterine or spermatic artery; at its middle by the middle ureteral artery from the iliacs. Practically the ureter is almost entirely supplied by the sympathetic system as the ureter functionates by rhythmical peristalsis and the smpathetic nerve alone posseses rhythm.

The most extensive sympathetic nerve supply of the ureter is conducted to it over the renal vessels. A profound sympathetic plexus entwined about the renal artery and here and there studded with nerve nodes (ganglia renalis) constitutes the plexus renalis which originates in the gangion coeliacum or abdominal brain. The plexus nervosa renalis is made still more powerful and extensive from the fact that it receives the least splanchnic nerve, thus combining the renal plexus with the abdominal brain and the lateral sympathetic chain. The renal plexus also receives branches from the plexus aortica and is intimately connected with the plexus adrenalis indicating its extene and profundity by also adding a strand from the I., II. & III. lumbar ganglia of the lateral chain. A branch of the plexus renalis courses distalward on the on the ureter. Any ureteral, pelvic or calicular irritation is rapidly transmitted to the abdominal brain over the plexus renalis where it is reorganized and emitted to all other visceral tracts and it passes the most rapid over the lines of least resistance, i. e., the ureteral irritation is emitted the most vigorously to those viscera having the greatest number of nerve strands. For example, a ureteral calculus located in the calyces or pelvis (which includes about half the subjects with ureteral calculus by excessive deficient or irregular ureteral peristalsis (ureteral colic) quickly transmits its derangement to the abdominal brain where reorganization occurs and emission of disturbance to the tractus intestinalis inducing nausea, indigestion, vomiting. The chief ureteral disturbance arises from defections at its proximal ends where nerves richly abound.

A second sympathetic nerve supply is conducted to the ureter over the vasa ovaria finally arriving at the ureter over the vasa ureterica proximal. This supply arises in the nerve ganglia located in the great plexus hypogastrica also derives branches from the plexus renalis. I found in dissecting a distinct nerve node (ganglion ovaricum or spermaticum) on the plexus ovarica or spermatica. In man this plexus mainly supplies the testicle while in woman it chiefly supplies the ovary. The nerve supply at the crossing of the ureter by the ovarian or spermatic vessels is distinct and rich.

A third sympathetic nerve supply is conducted to the ureter over the (vasa) arteria ureterica medial, a strong vasculor branch arising from the iliacs.

A fourth sympathetic nerve supply is transported to the ureter over the arteria uterina or spermatica. This is a rich nerve supply of many strands and ganglia.

A fifth rich sympathetic supply is conducted to the ureter from the distal end of the plexus hypogastrica. The ureter also receives numerous sympathetic nerve branches from the hypogastric plexus during its journey from kidney to bladder. The ureter is ruled and dominated by the sympathetic nerve. Sympathetic nerve plexuses course to the ureter and nerve ganglia reside within its walls. The chief sympathetic nerve supply to the ureter occurs at its proximal and distal ends—perhaps the proximal ureteral end has the richer supply. Yet the great cervico-vaginal ganglion, the pelvic brain emits numerous nerve strands to the distal end of the ureter. From the topographic relations of the ureter to the sympathetic nerves it is evident that irritation or disturbance of the rich nerve supply to the ureter would by reflexes quickly disorder other tracts as to peristalsis, absorption and secretion.

In nephroptosia, a frequent condition in woman, dragging trauma on the plexus renalis induces reflexes in the abdominal brain, dyspepsisa, indigestion, constipation, nausea, vomiting and ending fequently in neurosis. The disturbance in the ureter is chiefly due to obstruction of the urinal stream (caused by obstruction from calculus or ureteral torsion) or disease in the ureteral wall inducing defective ureteral rhythm or peristalsis. In diagnosing ureteral disease from pain one must consider the location of the pain and its lines of radiation or least resistance, i. e., the number of strands in the nerve plexus over which the irritation is conducted to other viscera. If the ureteral calculus be located as is usual in the ureteral pelvis the irirtation is rapidly and most forcibly conducted to the visceral tract which is most profoundly connected with the abdominal brain and that is the tractus vascularis, disordering its peristalsis, inducing dilation (congestion) and contraction (anemia, paleness). A second visceral tract in intimate association with the abdominal brain is the tractus intestinalis. Calicular and pelvic ureteral irritation (especially from calculus) rapidly passes over the plexus renalis to the abdominal brain, becoming reorganized, and emitted to the tractus intestinalis. Calicular and pelvic ureteral irritation (especially from calculus) rapidly passes over the plexus renalis to the abdominal brain reorganized and emitted to the tractus intestinal is producing deficient, excessive or irregular peristalsis, absorption and secretion (as nausea, vomiting, constipation, diarrhoea and neurosis). A disturbed ureter effects all other visceral tracts similarly to that of the tractus vascularis and intestinalis, however, it may not be so manifest. If the irritation be in more distal parts of the ureter the radiating on nerve plexuses will be of different degrees and directions e. g., if the calculus be lodged at the distal ureteral isthmus, where the ureter traverses the vesical wall the rhythm or diastole and systole of the bladder will be distinctly affected and frequent micturition occurs. All visceral tracts suffer from ureteral irritation similarly in degree according to the amount of nerve supply. The reflex effect of ureteral disturbance is the

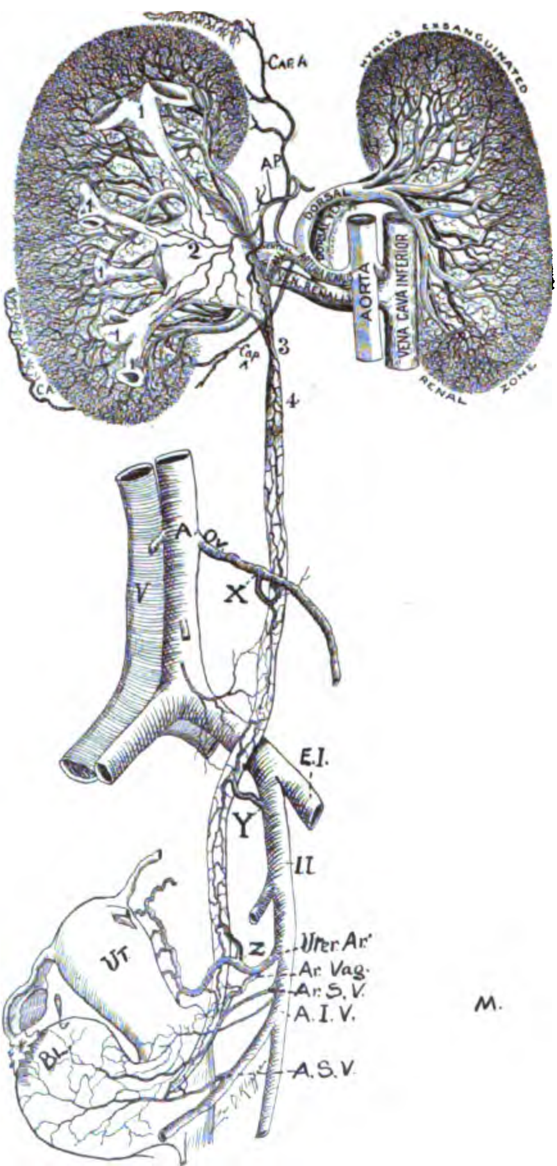

FIG. 1. Byron Robinson.) Presents the circulation of the ureter. The proximal part of the figure is drawn from a corroded specimen. The distal portion of the figure is drawn from a large number of specimens. The four great ureteral arteries are: 1, arteria pelvis eterica (A. PX); 2, arteria ureterica proximalis (X); 3, arteria ureterica media (Y); 4, arteria ureterica distalsis (Z). Numbers 2, 3, 4 are T-shaped arteries. Additional arteries which nourish the ureter are: Arteriae nutrientis pelvis (not marked in cut; arteriae vesicales inferior, media and superior; arteriae vaginales; arteriae hoemorrhoidales media and inferior. All arteries are accompanied by sympathetic nerves, hence it is plainly evident that the sympathetic nerves are abundantly supplied to the ureter on its large supplying vessels.

same on all other visceral tracts (intestinal, genital lymphatic and vascular), i. e., excessive, deficient or irregular peristalsis, absorption and secretion obtains. In woman pain from ureteral colic would radiate to the ovary and some to the inguinal region. In man the pain radiates distalward on the plexus spermaticus to the testicle, inducing retraction of the testicle. In diagnosing pain from the ureter on the sympathetic, plexus renalis, plexus ovarica (spermatica) plexus hypogastrica, plexus vesicalis—all directing their journey to the ganglion coeliacum, abdominal brain, whence reorganization and emission to all viscera especially the abdominal.

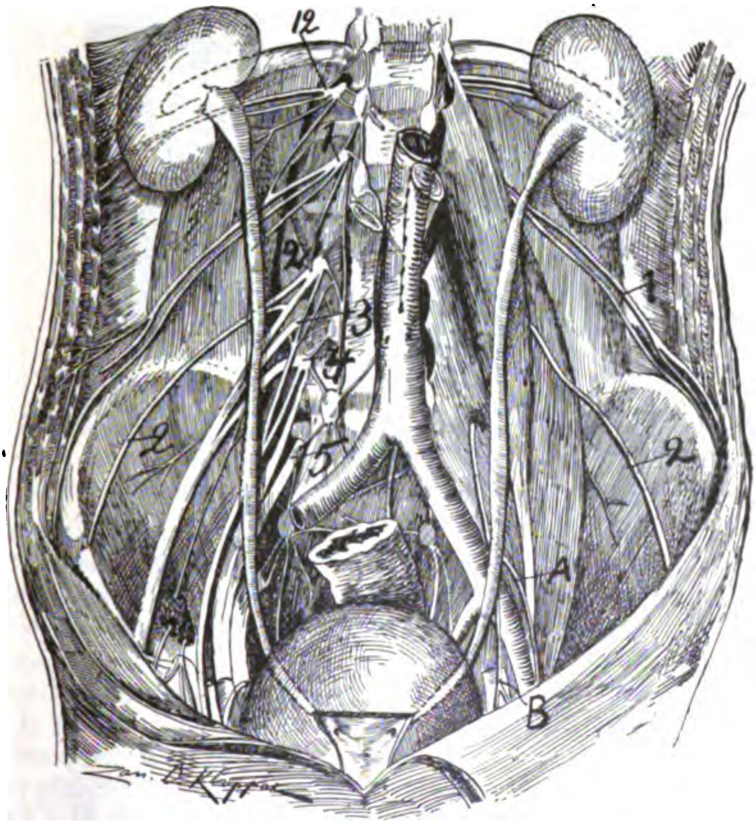

FIG. 2. Illustrates the relation of the spinal nerves to the ureter, especially the plexus lumbalis. The ureter is intimately connected with the genito-crural nerve.

The tractus genitalis and tractus urinarius arises from the same source, the Wolffian body, and hence are profoundly and solidly connected and anastomosed as to nerve, blood and lymph supply. This close relation may account for renal disturbances, reflexly as albuminaria during gestation as well as ureteral disturbance in structure and function as autopsies show that the ureter is dilated during gestation.

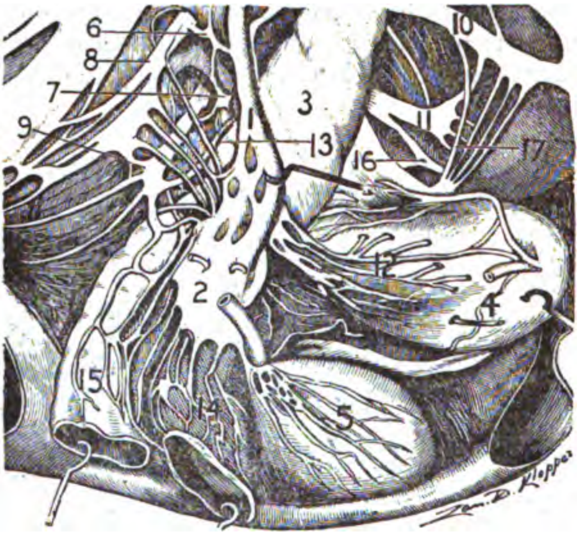

FIG. 3. (Byron Robinson.) Illustrates the ureter to the pelvic brain in women. The great cervico-vaginal ganglion presents nerves strands radiating on to the ureter and bladder.

THE SPINAL NERVE SUPPLY OF THE URETER.

Practically the spinal nerves reach the ureter indirectly similarly to those of the uterus. Spinal nerves directly entering the ureter would interfere with rhythm or peristalsis as spinal nerves do not possess the rhythmical character. However, the cerebrospinal nervous system and sympathetic are solidly and compactly bound together by: (a), the rami communicantes extending from the spinal cord and nerves to the lateral sympathetic chain; (b), the three great preyertebral plexuses; (cardiac, solar and pelvic) (c)' the cerebral or cranial nerve, the pneumogastric; connects the brain with the ganglion coeliacum; (d), so far as the ureter is concerned the genital branch of genito-crural nerve anastomoses in the inguinal canal—hence the typical testicle contraction, inguinal and femoral pain accompanying ureteral calculus with such intimate mingling and profound conection between the two great nervous systems—cerebro-spinal and sympathetic—both will share in the distribution of pain in ureteral calculi. The ureter is the most intimate as regards contiguity with the genito-crural. Next in intimte contiguity is the obturator. The ureter lies on the ventral surface of the psoas muscle in which is imbedded the great plexus lumbalis whose branches are closely adjacent to the lumbar ureter, however, this closely adjacent massive plexus lumbalis is connected with the ureter indirectly only.

SENSIBILITY.

The ureter possesses sensitive nerves as may be noted by irirtatin. The tunica mucosa is excitable. Some years ago I ligated quite a number of ureters of dogs to note resulting obliteration of renal function. I observed that such ligature was painful—however, periodically.

All observers note that ureteral calculus is painful. The terrific pain of some ureteral calculi is sufficient to indicate that numerous sensitive nerves reside in the ureter, its visceral pedicle or the abdominal brain. The pressure of urine on the mucosa of the ureteral pelvis and calyces appears to incite rhythm. However, ureteral segments with no urine on the mucosa will contract rhythmicallyy. It may be claimed that insufficient sensory nerves reside in the ureter to produce severe pain in ureteral calculus. Here it may be observed that the sensory nerves may lie in the mesentery of the ureter (neuro-vascular visceral pedicle) or in the celiac plexus, the abdominal brain, whence, by excessive ureteral rhythm, excessive ureteral colic, the pain is due to the dragging or the twisting, rotating ureter on the sensory nerves in the mesentery of the ureter (the neuro-vascular visceral pedicles) or the celiac plexus, the abdominal brain. Hence for the pain in the ureteral colic it matters not whether the sensory nerves of the ureter reside in the ureteral mucosa, muscularis fibrosa, ureteral mesentery (neuro-vascular visceral pedicle) or solar plexus, abdominal brain.

The gold chloride method as well as the silver method of staining demonstrates that the ureteral surface is covered with a nework of nerves. Besides a great plexus of nerves, basis plexus or ground plexus of Englemen resides in the tunica fibrosa ureteris.

For those interested in investigating the nerves of the ureter it may be suggested the ureter of the common house rat (mus decumanus) is rich in nerves and mav be obtained fresh for microscopic purposes.

LUNGS IN HEALTH AND DISEASE—MORE PARTICULARLY THE VESICULAR MURMUR.*

BY DR. W. N. UNKEFER, PIQUA, OHIO.

My purpose in this writing is to individualize this one and only ausculatory sign as the criterion of pulmonary health, its absence as the positive proof of either functional or organic disease. Also suggestions as to the most successful method that I am acquainted with in restoring and its application to the treatment of pulmonary tuberculosis. In the auscultation of the normally acting healthy chest, two sounds are heard on inspiration, totally different in production, location and character. The first is the bronchial sound, caused by the inrushing tidal air, through the convective system of tubes, and is in varying quality and pitch, always present in health and disease. It is first in regard to the time of its production in the inspiratory act, and during the first eight to twelve years of life is the only sound heard in health, the pulmonary system being as yet incomplete. The tidal air does not pass as such further than the third or fourth division of the bronchial tubes, consequently the murmur which follows the bronchial is entirely distinct from the bronchial in location and character, although wholly dependent on it for its production.

Where tidal air ceases residual air commences and fills the entire pulmonary system, the volume of which is increased about 1-10 by each normal inspiratory effort. It is this increment of tidal air imposed upon the residual air, which renders the air cells tense and produces the vesicular murmur by the contraction and relaxion of their walls upon the residual air. Here the interchange of gases takes place, in accordance with the well known law of diffusion, and the circle of the inspiratory act is complete.

The vesicular murmur begins as soon as the residual air is increased to the extent of rendering the air cells tense. In full breathing, it is heard before the tidal friction sound of the bronchi ceases, producing the broncho-vesicular murmur, and is continuous after the bronchial sound ceases. The production of the vesicular murmur may be prevented or interfered with in part, by various influences and conditions of disease, some of which are not incompatible with a considerable degree of comfort and usefulness, for a limited period. The conditions of this period we are to take particular notice of, as it is the true pretubercular period.

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* Read before the Miami County Medical Society.

We very commonly meet with cases in which the vesicular murmur is entirely absent, except in forced inspiration. In women this is very often the case as a result of tight clothing, with the outward and upward movements of the chest, and the murmur cannot be produced in the lower lobes of the lungs until the constriction is removed. We often hear the expression "weak lungs," as applied to people of sedentary pursuits, or to those who by heredity or environment are lacking in energy and vitality. I prefer to call them "lazy lungs," as better indicating an exact condition, and as a means of impressing the patient with the fact that by his own exertion he may have strong lungs. Lazy lungs are those in which the pulmonary function is imperfectly performed in the absence of all organic disease, resulting in a disproportion of blood and air in the lungs, the former being in excess and its progress through the lungs being retarded. As the blood current rushing into the heart excites it to forceful contractions, so too the air currents rushing into the lungs with each inspiration increasing the tension of the alveolar walls stimulate them to contraction, as evidenced by the vesicular murmur.

The necessity for a proper volume of air is just as important for the lungs as a due proportion of blood is required for a perfect and forceful contraction of the heart. The contraction of the air sacs produces not only a more rapid interchange of gases, but also aids in the propulsion of the blood through the pulmonary capillaries, relieving stasis and preventing exudates. An incomplete pulmonary function produces blood stasis, and stasis produces exudation which may take place into the bronchi, the intercellular spaces and upon the surface of the plura. When these exudates occur there is more or less muffling of the vesicular murmur, and according to degree and location the production of rales, either bronchial or interplural. That which is exuded into the intercellular spaces, causes no sound, but interferes with the production of the normal vesicular murmur. These exudates often occur simultaneously and are found most frequently in the apices about the third intercostal space in front and reaching directly through to the plura in the interscapular space.

These exudates which are purely of a non-inflammatory character when stirred by respiration produce rales which are usually diagnosed as bronchitis, but in consideration of their etiology in obstructed circulation, more properly called bronchial catarrh or catarrh of the apex, a result of pulmonary inactivity, a passive condition rather than an active process. There are many direct causes of this passive condition. I have already mentioned the effect of tight clothing in women, which is so often persisted in to such an extent as to produce an arching of the sternum compensatory to the constriction. This takes place only in vigorous breathers with good muscular development. Sedentary occupations are productive of pulmonary inactivity. Underfeeding and overworking, the hard side of life, worry and care and many others, any one of the many influences in life which weakens muscular system, exerts a depressing influence on the respiratory system indirectly through the nervous and digestive systems by decreasing the activity of the diaphram and chest muscles, and thereby impairing the function of respiration in the complete oxygenation and vitalizing of the blood, which process is announced by the vesicular murmur.

Big breathers are good eaters and big eaters are good breathers, as a rule, because the muscular and nervous systems are well nourished. Tuberculous infection becomes a possibility only when the soil is prepared for the reception and propagation of the bacilli. Our attention has been directed so much during the past ten or twelve years to the bacillus and the means of combating it with drugs and serums, all of which have proved of doubtful utility, that it seems to me that we should take a new departure, not only in our pathological views relative thereto, but also in our practice. Much has been said and written about suitable soil without defining exactly what that soil is, how it is produced and how immunity may be acquired. It used to be taught that man possessed a surplus of pulmonary tissue which was not always required to be in complete action, but was kept in reserve emergencies. This was certainly a fatal mistake, for all that a tubercle bacillus wants for a comfortable home is a choked capillary bronchus. Either the result of insufficient expansion of a lazy lung or of an active process of conjestion or inflammation. The tubercle bacillus fails in its attack upon healthy tissue. It succeeds only when it finds either functional or organic abnormalties. Imperfect function as evidenced by the absence of the vesicular murmur must always result in organic disease sooner or later, (not necessarily tuberculosis) and it is all that is required, as the primary condition in furnishing a suitable soil for the bacillus in the pulmonary tissue. The pulmonary apices are primarily infected as a rule, because they are not as continuously and thoroughly expanded as the middle and lower portions, consequently blood stasis occurs, producing exudation as revealed by the mucous click. This symptom has been regarded by many good clinicians as a positive evidence of tuberculosis without the evidence of the microscope. I have seen many such cases of catarrh of the apices; under the practice of systematic expasion, make a complete recovery of the function, with the removal of all abnormal ausculatory sounds, and the return of the pure vesicular murmur which is the evidence of pulmonary health. We might as well try to strengthen a weak arm by carrying it in a sling, and by the administration of drugs , as to strengthen weak lungs by any and all the drugs known to medical art, without attention to the deficient function. In the treatment of such conditions we must use the same common sense which would guide us in the treatment of weak muscles or organs in any other part of the body.

Use and use only makes strong muscles and strong lungs. The better the oxygenation of the blood the greater is its capacity for the reception of nutritious pabulum, with an increase of red corpuscles. The cold, livid finger tips become warm and of a healthy pinkish color; the appetite is improved and every function is benefiited to a remarkable degree, with increase of body weight and endurance. In the examination of the chest our attention should be directed first, not so much as to what abnormal sounds are present, but as to the degree in which the normal sounds are present or absent, for the purpose of ascertaining whether an anatomical recovery may be obtained in order that we may obtain a clinical recovery. In any impairment of the pulmonary function, whether the microscope reveals the bacilli or not, it is safe always to suspect that such a development may occur, because the soil is prepared for the seed and our efforts should be immediately directed toward the cleaning up of that soil, so that there shall be no suitable habitat for the bacillus. The vitality of the tubercle bacillus is very low and unless it finds a location exactly suited to its growth and development, it perishes. If, according to Nuttall, a tuberculous patient expectorates about three billions of bacilli in twenty-four hours, certainly only a very small number find a suitable soil for their support, and yet when we take into account Naeglis statistics in the pathologic institute of Zurich, it appears that the infection is almost universal as active or latent being 97 per cent. of those over eighteen years of age, with positive evidence at autopsies of non-fatal tuberculosis.

The human system then is able to resist the infection of tuberculosis in a very large majority of cases, and it must be from nature that we may expect to learn the method of successful treatment, for our art has failed by drugs and serums alone. Even should we be able to cure a specific case by tuberculin or other serums, what is to prevent a new infection. If we leave the lungs in the same condition as they were in before the bacilli were rendered innocuous, for it is through the respiratory apparatus much more than through all the other organs or tissues that the infection is received. This brings us to face the stubborn fact of the suitable soil which nature by its own process succeeds in changing to an unsuitable soil and as Vergely has tersely expressed it. The soil is everything, the microbe nothng. And another, that Koch's bacillus is not enough to produce tuberculosis. There are, no doubt, other factors which go to make up this preparatory condition, besides deficient pulmonary function. We may yet learn that good rich blood contains an antitoxin principle which it may not always possess, particularly when deteriorated and that the loss of this antibacillary power is the cause of the system succumbing in rapid miliary tuberculosis. Mays believes that tuberculosis may be primarily a neurosis, and adduces plausible argument in support of his theory, but from my present standpoint I look upon the neurotic condition as contributory to that condition of pulmonary inactivity, which may be both a cause and an effect in the preparation of the suitable soil.

It cannot be denied that the tuberculous infection is well nigh universal, and that but few in comparison to the great number infected live the average life of man without at some time being infected by it. Autopsies made upon those dying of other diseases and by violence prove this. The greater number of those infected recover without the knowledge of the fact of infection. Nature can and does get rid of the bacillus, and although there may not be a complete anatomical recovery as indicated by the scars left after the healing of cavities, yet there is a complete clinical recovery, and full functional activity of all the remaining pulmonary tissue. Fibrinous exudations upon the plural surfaces form adhesions between the opposing surfaces, when there is deficient pulmonary activity, and according to their closeness and thickness prevent the expansion of the subjacent lung tissue, as evidenced by the muffling or complete absence of the vesicular murmur. The starting point of a tuberculosis may have been years before the actual onset of the disease, occurring in pleurisy or a pluro-pneumonia, in which the exudates have not been absorbed, but remains as an organized barrier to perfect inspiration, either in the lung tissue or on the pleura and thus furnish the suitable soil for the bacillus. After the clinical recovery from a pneumonia or pleurisy, the closest attention should be given to the anatomical recovery by systematic expansion of the lungs until the pure vesicular murmur is heard without muffling, when there wil be no soil suitable for the bacillus. The expansion of the lungs is very materialy aided by cold frictious baths. There is a direct nervous connection between the skin and the lungs. It is through the intimate nerve connections between the skin and lungs that such remarkable results in the treatment of tuberculosis have been obtained by Winternitz and others in Hydropathia institutions, and distinguishes cold bathing as a most valuable adjunct in bringing about a clinical recovery of the lungs in which the bacillus cannot grow and in which the inspiratory act is complete in the pure vesicular murmur. We should early discover the evidence of tuberculosis in order to treat it successfully, but we should much earlier discover whether the soil in any suspected chest is prepared for the ever present bacillus, and by attention to the function of the lungs, put them in such condition that infection shall be an impossibility. This is to be done by syetematic mechanical expansion of the lungs by appropriate exercise, by the daily use of baths and friction, by regulation of the diet, by the administration of such medicines as shall strengthen the nervous system and enrich and invigorate the blood cells, by attention to the sanitary condition of the home, by the proper ventilation of living and sleeping rooms. by life out of doors, by cheerful surroundings and cheering company. The difficulty of diagnosis, and the dangers of becoming tuberculosis become as nothing if we accept the clinical evidence of an impaired function producing the suitable soil for the bacillus, and when we act upon that evidence in nature's method of restoration, by opening up and clearing out every tube and cell, by systematic expansion of the chest. Where purulent infection has taken place, as in an ovarian tube or the appendix being formed or in any other locality of the body, we put in the knife and clean out the cavity and thus get rid of the infection. In chocked bronchial tubes which are the starting points of the active process of infection, we can put air in, which is quite as incisive and effective in relief of such conditions as the knife is in the others. Why should we wait until the infection has been proved by the microscope, before commencing radical measures, when the clinical features of the case warrant us in declaring that such a chest is prepared for the bacillus, through imperfect function, or through exudations resulting therefrom.

In this respect we have been leaning too much upon the evidence of the microscope and too little upon equally as positive clinical evidence of far more valuable diagnostic importance, viz.: Imperfect function as shown by the absence or muffling of the vesicular murmur. If we accept the clinical evidence the fight with the bacillus can be easily carried to a successful issue, outside the walls. But if we find that the bacillus has already taken possession, the fight will be longer and harder, and accompanied with many dangers, although it may yet be carried to a successful result if we follow the teachings of nature, so far as we know. The vesicular murmur is a gentle, breezy sound, exactly like nothing else in the world, but when thoroughly appreciated, one of the most delightful sounds the ear can listen to, for it means absolute health; its absence, absolute disease sooner or later, unless restored by appropriate means, intelligently directed.

ANTITUBERCULAR DISPENSARIES.

BY L. GUIBERT DE LA MACHE, B. A., M. D., COLUMBUS, OHIO.

Happy horse! Unhappy man! If as much had been done for the second as has been done for the first, instead of a mortality, due to tuberculosis, of one in sixty, we would have a mortality of one in a thousand. As to the susceptibility of the horse to the bacillus tuberculosis, Nocard, by experiments made at the veterinarian school of Alfort, has proved conclusively this susceptibility to be extreme, consequently no discrimination is possible. In the United States every year about 150,000 persons pay the tribute of their life to the great killer. A horse dying of tuberculosis, pure and simple, is a rare event. Happy race of Bucephalus! Unhappy race of Adam!

The reproduction of a horse with defects, unsound, has never been allowed; the reproduction of tubercular human beings is continually going on, children predisposed to this disease being born every year by thousands. It is true that a horse has a cash value.

The remedy to these present conditions seems to have been found in the establishment of State sanatoria. A sanatorium for the treatment of a certain class of diseases, like nervous or mental, can reach its useful end by itself, for its attacks are directed, everything considered, against a minority of morbid conditions. But when a sanatorium is founded to fight such a disease as tuberculosis, which means a fight against a majority, it cannot do all the work by itself. It must have some help, it must have a preparation and a complement, it must have branches and ramifications all over the nation. Like the roots of certain trees, which form a network on a given area of ground, preventing the growth of any vegetation, so ought the sanatorium for tubercular patients to send its branches, its ramifications, everywhere, preventing the growth of the bacillus tuberculosis.

The State sanatoria, even in large numbers, whatever may be the excellence of their management, will not stop the progress of tuberculosis. They will not give any large results, if working alone, for their power of action will be limited and the field of work too vast. They will be obliged to work by a selective process, because they will not be able to accommodate its too numerous victims. The blows to be struck must not be struck, here and there, at intercals, but everywhere, all the time, en masse.

An antitubercular institution is necessary to prepare and complete the work of the sanatorium. This institution should be ready to receive, at any time, all tubercular patients, without distinction; able, even, to attract them. It must reach the root of the disease, must look for it where its victims are the most numerous, must prevent its spreading. This can be accomplished by the foundation in every populous quarter of every city of an antitubercular dispensary, as proposed in Europe. The support of such an institution can be obtained in two ways:

1. By the city itself, through the board of health, electing after examination and under civil service law a number of special trained physicians to direct these dispensaries.

2. By philanthropy, making of the dispensary an institution social, humanitarian. On account of this social side of the dispensary the physician who takes charge of such an establishment ought, besides the distinguished, zealous confreres, devoted to the holy cause of the antituburcular defense; to surround himself with philanthropists, economists, disinterested organizers, who would give to the work a regular, methodic administration. One of the best organizations can be formed by the workingmen unions. They have interest in helping tne physician, and such societies as The Antitubercular Society of Printers, of Glass Workers, of Retail Clerks, etc., may be founded. This social institution should not be a clinic, but a sanitary establishment, a watch post in the most populous quarters of the cities, where the poor should be well received, well cared for, well assisted. To all these unfortunates should be given free drugs, food, clothes and, if necessary, some money. Pocket cuspidores, sanitary vases, antiseptics, should also be given to them. All lodgings of tubercular patients should be disinfected regularly and methodically with formaldehyde. The sanitary education of the people should be made through familiar talks, pamphlets and public lectures. The tubercular patients found in very poor surroundings should be removed;

those without any resources should be sent to the country or to the sanatorium. The direction of such a dispensary is so complex on account of the multiple conditions which it must fill that the physician who undertakes such an establishment is unwise if he has not received a serious training in tuberculosis, especially in the practical, social and administrative part of it. The local of the dispensary may be very simple. In attacking the disease, so terrible, in every direction, one ought to be able to obtain splendid results.

The predisposed, especially the children and infants, may be protected from the contagion. The tubercular in the first degree have many chances to be cured in such a dispensary. Those in the second degree may be improved. The true phthisics should be watched and put under conditions where they will not be a social danger of contagion.

The sanatorium and dispensary should complete one another. The dispensary should make the selection of the patients and send to the sanatorium those who may be benefited by a sanatorial treatment. After this treatment the dispensary should take back the patient cured or in better health, watch him again, to see if his improved condition continues. Besides this, the antitubercular dispensary should occupy itself not only with the patient alone, but it should take interest in his family, his social situation, his surroundings and neighbors.

ESSENTIALS OF MATERIA MEDICA AND PRESCRIPTION WRITING. By Henry Morris, M. D., College of Physicians, Philadelphia. Sixth Edition, Thoroughly Revised. By W. A. Bastedo, Ph.G., M. D., Tutor of Materia Medica and Pharmacology at the Columbia University (College of Physicians and Surgeons), New York City. 12mo volume of 295 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, $1.00 net.

Dr. Bastedo, in making the revision of Dr. Morris' "Essentials of Materia Medica," has furnished the student with a work complete and up to date in every particular. Much of the text has been in great part rewritten. There have been introduced articles on adrenalin, stypticin, and on the iodine and silver synthetics. The present sixth edition is all that could be desired.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, January 16, 1905.

F. F. Lawrence, President. Chas. C. Shepherd, Secretry.

Thirty members were present.

Dr. W. J. Means presented specimens of a fetus of five months development, a large tumor composed of placental tissue organized blood clot and uterus removed in an operation for ectopic pregnancy and gave the following history of the case:

Mrs. B. Age 35, married, multipara, last child born Nov. 1, 1903. Nursed the child. First menstruation following labor, April 3, 1904. She had morning sickness in May, breasts became tender and menses failed to appear. She suspected pregnancy and on June 8 went to an abortionist and had an operation. There being no result she went again June 16 after which she began to flow, which continued for ten days. She had pains during this time and about the 23rd chills and fever came on with severe pains in abdomen. She called Dr. J. F. Jones who diagnosed sepsis from reained fetal debris. Her symptoms growing worse I was called in consultation June 27. The patient was then suffeding from pelvic inflammation, temperature 102, pulse 100, pains in abdomen and had an offensive vaginal discharge. Curettage was advised. She was taken to the Protestant hospital and operated June 28. The uterus was dilated and with dull curett a large fleshy mass was removed that had all the appearance of placental tissue. The uterus was enlarge, the cavity measuring four inches. A tumor with a relative size of a hen's egg was discovered in her right side which was diagnosed tubal trouble. The necessity for an operation was considered, but owing to the fact that the consent of the patient had not been obtained for anything more than a curettage, it was not made. The patient made a good recovery, temperature going to normal the third day and remaining there. You will notice its size and also that it is covered with a capsule. According to the history a rupture of the tube must have taken place August 1. One of the interesting problems of the case relates to the character of the membrane which I removed June 28. Was it distinctly a decidual membrane, or was it placental? At the time I was quite sure it was placental tissue. Taking into consideratin the history of the case, the enlarged uterus, the trouble folowing the efforts at abortion, I feel there is strong evidence in favor of a uterine pregnancy. There was no question about the character of the enlargement in left tube; subsequent development proves this to have been a tubal pregnancy. The specimens are interesting from a pathological standpoint. There was a complete separation of the sac enclosing the fetus and the one surrounding the placental mass, there being no communication except by the umbilical cord. The size of the placental mass is another interesting feature. When removed it was quite as large as normal fētal head at full term. The patient made a good recovery and left the hospital in two weeks from date of operation.

She was discharged July 4. August 1 she had a severe pain in her right groin that caused her to fall to the floor. After a few hours time she got better and went about her work, but continued to suffere more or less uneasiness in the lower portion of her abdomen. There was no hemorrhage from the uterus. Oct. 1 she had a sensation that felt like motion from a child. She called on me Oct. 16. After a careful examination I decided that she was pregnant and that the fetus was extrauterine and so advised her. Also advised an operation. Nov. 1 she had another attack of pain after which time she did not feel quickening. Nov. 14 she had profuse hemorrhage after recovery from which she felt better and insisted that the tumor was much less. She was finally persuaded to have an operation. She was taken to the Protestant hospital Dec. 14 and was operated 10 a. m., Dec. 15. The fetus was found lying transversly above pelvic brim, surrounded by a thin membrane that was attached to all the surrounding viscera. The membrane had the appearance of the amniotic sac. The cord extended to a mass in the culde sac that filled the pelvis forcing the uterus and bladder well above the pubis. The left tube was adhered to the membrane surrounding the fetus and the right one was not recognizable. Owing to the extensive adhesions and diseased appendages a hysterectomy was considered the safest procedure. The appendix was found inflamed and removed.

Evidently the pregnancy was primarily tubal and secondarily abdominal with the placenta attached posterially on the tube where it remained after the escape of the fetus into abdominal cavity. An oozing hemorrhage must have continued some time around placenta to form the tumor filling the pelvic cavity.

Dr. Timberman's paper on "Strabismus in Children" was discussed by Drs., W. K. Rogers, Brown, Blake and Davis. Dr. Rutter's paper on "Traumatic Neuroses" was not read owing to the absence of the doctor.

Dr. Bowen's paper on "X-Rays in the Diagnosis of Fracture, Dislocation and Foreign Bodies" was discussed by Dr. Early.

Election of candidates was next in order and Drs. Bleile, Klein and Rice were elected unanimously.

The applications of Drs. Leslie M. Lisle, H. B. Blystone and Clifton Reedy were read and referred to board of censors.

Moved by Dr. Tarbell and seconded by Dr. Raushkalb that time of meeting be changed from 8 p. m. until 8:15 p. m. Carried.

CHARLES SHEPARD, Secretary.

ESSENTIALS OF MEDICAL CHEMISTRY. Sixth edition, thoroughly revised. Essentials of Chemistry, Organic and Inorganic. Containing also questions of medical physics, chemical philosophy, medical processes, toxicology, etc. By Lawrence Wolff, M. D., formerly Demonstrator of Chemistry at the Jefferson Medical College, Philadelphia. Sixth edition, thoroughly revised, by A. Ferree Witmer, Ph. G., formerly Assistant Demonstrator in Physiology at the University of Pennsylvania. 12mo volume of 225 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, $1.00 net.

LEA'S SERIES OF MEDICAL EPITOMES. Magee & Johnson's Epitome of Surgery, and Nagel's Epitome of Nervous and Mental Diseases. Lea Bros. & Co., Publishers, Philadelphia and New York, 1904.

The value of these epitomes has been referred to in former reviews. In this age of State Board Examinations students will find them of very great value in reviewing the subjects on which they expect to be examined.

Periscope of Medical Progress.

MEDICINE AND SURGERY.

VOLVULUS OF THE STOMACH.—Spivak, in the Denver Medical Times, has an article on Volvulus of the Stomach. After reciting several cases reported by various operators he arrived at the following coclusions:

1. The occurrence of volvulus of the stomach is a possibility beyond the shadow of a doubt; it remains, therefore, for physicians to bear this condition in mind when making a differential diagnosis between pyloric obstruction, occlusion of the bowels, poisoning, cyclic vomiting, cholelithiasis, peritonitis, etc.; for surgeons to be ready to operate when necessary and not to forget to empty stomach of its contents; and, for authors to devote some space to this condition in their text-books on diagnosis and surgery.

2. Volvulus of the stomach occurs in all ages and in both sexes.

3. Digestive disorders may be considered as etiologic factors.

4. From a pathologic standpoint volvulus of the stomach may be divided into (a) that due to organic changes produced by adhesions, and (b) that in which no visible organic changes have taken place.

5. The characteristic symptoms of volvulus are: Sudden onset; distention, which commences in the left hypochondriac region, and which gradually increases in size; a tumor, which gives on percussion a tympanitic sound; vomiting or regurgitation immediately following ingestion of food or drink; no belching, no escape of flatus; inability to pass a sound into the stomach.

6. When the condition is recognized, early operative interference is indicated, and recovery is almost certain.

A REPORT OF TEN CASES OF PNEUMOTHORAX OCCURRING IN PULMONARY TUBERCULOSIS. J. W. Trask, M. D., Ft. Stanton, N. M.—Journal of the A. M. A., March 5, 1904.

Out of forty-one deaths occurring at the U. S. Public Health and Marine Hospital Service Sanatorium for Tuberculosis at Ft. Stanton during the nine months from September 1, 1902, to May 31, 1903, nine revealed the presence of pneumothorax at autopsy with one case still living, making a total of ten cases during the nine months. Of these five were total and five were partial. From a careful analysis of these cases the etiological factors leading to the perforations seemed to be obscure. He states that in each case the accident occurred at the time of comparative rest. The symptoms of onset were similar in the series of cases and consisted of an initial intense pain on the affected side, accomplished by urgent dyspnea, general distress, cyanosis, and a rapid, weak pulse. The voice was in most cases affected, being weakened and of a whispering character.

The physical signs were enlargement of affected side and obliteration of intercostal space, shoulder elevated, much diminished respiratory movement and in some cases an entire absence, displacement of apex beat and hyperresonance.

Prognosis: From the writer's observation it is very unfavorable. Of this series of cases, three died from shock, two in a little over an hour after the onset, and the third after fifteen days. Two died of asphyxia, one in three, and one in nine days, and three died from exhaustion in from seventeen to seven weeks.

The cases of partial pneumothorax lived from three to seventeen days, and the total cases from one hour and ten minutes, to the duration of the case still living at an interval of over two months from the onset.

The author's conclusions: From our experience of the last nine months it would seem that pneumothorax is a more common accident here than elsewhere, and that the prognosis is less hopeful. If this be so we would naturally look to the altitude of 6,150 feet as a possible explanation, inasmuch as it requires more air to be respired to oxygenate the blood, and consequently a greater amount of lung or a greater activity of the same amount as would be needed in less elevated regions, and therefore any great disturbance of the respiratory tract such as occurs in pneumothorax is not well borne. But the drawing conclusions as to why so large a percentage of the deaths at this place have been due to this cause must be deferred until more cases and a larger series can be reviewed.

THE COLUMBUS MEDICAL JOURNAL.

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FEBRUARY, 1905.

Editorial.

THE TREATMENT OF CANCER.

There devolves upon the profession an important duty in educating the public mind in reference to the need of proper treatment of cancerous growths. As a rule there is too much delay in applying to a surgeon for treatment, and too frequently irritating local applications are employed. At the last meeting of the American Medical Association, Doctor Kean read a valuable and timely paper on the treatment of moles, in which he stated instances in which apparently harmless moles took on an active growth and resulted fatally. He urged a complete excision of all moles at the first appearance of the least irritation. In the Bradshaw lecture, recently delivered, Doctor Mayo Robson urged the same treatment for all cancerous conditions. In his lecture, we quote from *The Hospital,* he sought to educate the public mind to a better view in reference to dealing with this condition. He protested, both against the fatalistic tendency to delay, and the senseless running after false gods in the treatment of this disease.

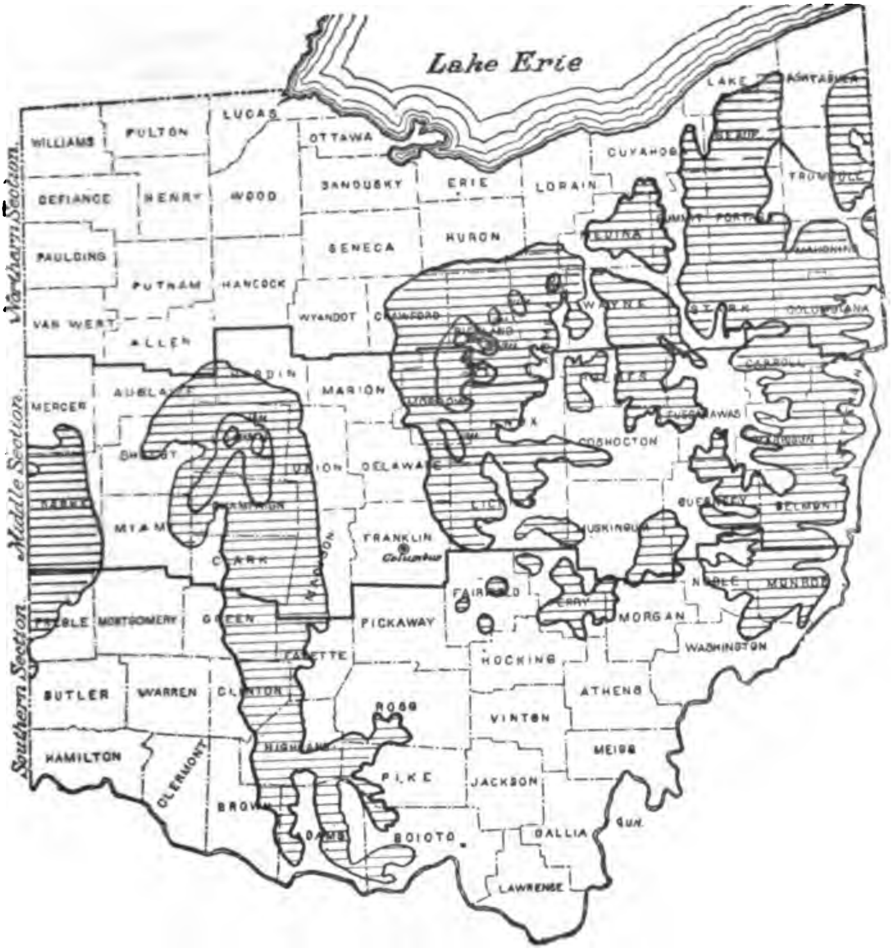
"Too late" has yet to be said in one-half or three-fourths of the cancer cases when seen by the operating surgeon. Thus surgery is deprived of the opportunity of achieving that success of which it is really capable. Early and complete removal with the knife can offer a fair prospect of cure, and further than this a great deal more could be done by a more frequent resort to "preventative operations." In certain situations, such as the tongue, lips, larynx, uterus, and the skin, pre-cancerous conditions can be recognized; and it is probable that every cancer, whether external or internal, folows on a pre-cancerous condition—such, for example, as cancer of the gall-bladder folowing on ulceration produced by gall-stones, cancer of the stomach on chronic gastric ulcer, epithelioma of the penis on irritation under a phimosis, cancer of the bladder on popilloma or on ulcers due to calculi, and cancer of the rectum and colon on stercoral or other ulcers. The liability of benign tumors, especially on epithelial surfaces, to undergo malignant changes is well recognised, hence the removal of such is generally advisable. A general acceptance of the view that cancer has usually a pre-cancerous stage and that this stage is the one in which an operation ought to be performed would be the means of saving many lives. Again, preventative treatment includes the removal of known factors in the causation of cancer as well as the abolition of discoverable pre-cancerous conditions. Thus excessive smoking, especially when a clay-pipe is used, sharp edges of teeth, and ill-fitting and irritating artificial tooth-plates are all recognised as taking part in the production of oral cancer, and they are all factors which can be avoided.

We join with the above authorities in the hope expressed by *The Hospital* that the necessity for anticipating malignant growths will be realised one day by the public, and that they will cease to trifle with their ailments until the favorable moment has gone by, and they can only receive the verdict, too often pronounced, too late.

A SITE FOR THE OHIO STATE SANITORIUM.

The Ohio State Sanatorium Commission at a recent meeting, according to the *Ohio Sanitary Bulletin*, adopted the following minimum requirements for a site for the proposed hospital for tuberculosis: It shall include not less than 350 acres of land. A portion of this land shall be not less than 800 feet above sea lev.el.

A certain part of it must be timbered. The land must afford a suitable site for buildings, sloping south, south-southeast or south-southwest; and be well sheltered from prevailing winter winds. It must also offer a pleasing landscape. The soil must be dry, pure, easily drained, and at least 100 acres shall have good



Elevation in Feet.

□ ▤

Below Above
1,000 1,000

agricultural qualities. An abundant supply of pure water shall be easily accessible. The site must be not more than three miles from a railway station, and not less than one mile from any city or village. It must afford good railroad facilities and be easily accessible from any part of the State. The accompanying chart has been kindly furnished by the *Ohio Sanitary Bulletin*, from the report of the State Tuberculosis Commission.

It shows roughly the sections of Ohio that are over and those below 1,000 feet in elevation, and in addition some of the small areas that are above 1,200 fee.

Less than one square mile is over 1,500 feet above sea-level. This is in west-central Logan county, near Bellefontaine, where one hill rises to 1,540 feet and another to 1,525 feet. At least one-fourth of the State is above 1,000 feet. Of this it is estimated that about 4,000 square miles is in the western half and the balance in the eastern. There are extensive areas in the eastern section rising from 1,200 to 1,300 feet above se-level. The area of the State is 40,760 square miles, and it is estimated that only 460 square miles is below 500 feet. The lowest point is about 425 feet above mean tide. The mean elevation is probably slightly above 850 feet. The members of the commission are the governor, the state auditor, the attorney general, and the secretary of the state board of health, all ex officio, and Judge N. J. Driggs, of Monroe county, by appointment of the governor.

It is probable that the commission before making a selection will visit such of the proposed sites as seem to come within the requirements.

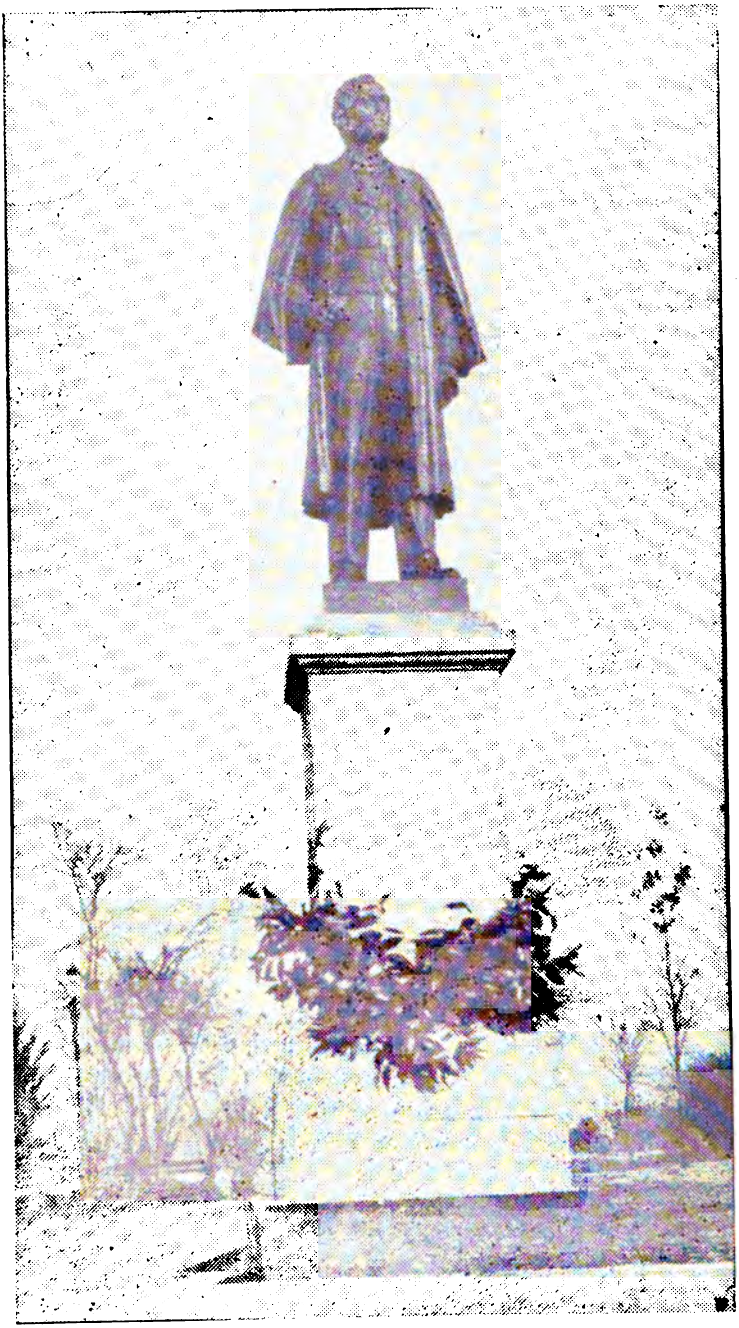
PROFESSOR NIELS R. FINSEN.

Professor Niels R. Finsen, discoverer of light rays for the cure of lupus and founder of the Finsen Institute at Copenhagen, died September 24 of this year. He was born (1860) in Faroe Islands, and spent his youth in Iceland. At 21 he entered Copenhagen University. After receiving his Doctor's degree he became instructor in Anatomy at that University. While in Iceland he had noted a difference in the effects of north and south light upon persons living in a room facing the south from that which was produced by living in a room facing the north. "In his early manhood," says the Post-Graduat Monthly, "he came across a pamphlet written by a Dr. Picton, of New Orleans, in regard to certain medical phases of the American War of Independence. Dr. Picton had noticed that out of a number of prisoners suffering from small-pox, some being confined in light rooms had no secondary fever and were no pitted by the disease. Finsen's mind being turned to the subject of the effects of light and these discoveries, he immediately with the help of Professor Widmark, began to make use of them, the latter author having pointed out that the ultra-violet rays of light inflamed the skin of human beings. Finsen found as a sequel to this, that the rays of light from which the chemical rays—the blue-violet and the ultra-violet—had been removed, could be used beneficially in cases of small-pox. Then he went on to suppose that rays of light could be made actually to destroy bacteria. He conceived the idea that by concentration the bacteria-destroying rays of sunlight in overwhelming force on small areas of human skin, he might be able to burn bacteria to death in an hour, while their life was merely arrested by the ordinary rays of sunlight. He went on then, we are quoting again from the Spector, from experiment to experiment, using an ordinary magnifying glass and cooling the rays through a blanket of water, until he actually cured a patient who had suffered for eight years from lupus. A year from that time he began to give a regular course of treatment to sufferers some Governments that are alive to the importance of the labors of such men as Finsen, advanced him a loan free of interest, and since 1896 more than two thousand patients, coming from all parts of the world, have been treated at the Finsen Institute at Copenhagen, where six doctors and some sixty nurses are now employed for this purpose."

The Finsen treatment has been introduced into most all civilized countries. In his study of the influence of light, Prof. Finsen had found that the disfigurement made by small-pox might be prevented if the patient were kept in a room lighted only by red light. In 1903 he was awarded the Nobel prize.

INSTRUCTION IN PUBLIC HEALTH.

We are glad to note that the authorities in some of our leading universities are arranging for instruction in public health. This is done in response to a sentiment very general throughout the country in favor of special trained health officers. There is an



Monument to the Memory of DR. W. E. B. DAVIS, Birmingham, Ala., erected by the Southern Surgical and Gynecological Society, unveiled August 12th, 1904.

Reproduced from the BIRMINGHAM NEWS by courtesy of the Birmingham News Publishing Company; photo by Covell, Birmingham, Ala. For biography, see Vol. XXVII, p. 187.

increasing demand for such officials. Heretofore, special facilities for special training in matters pertaining to public health have been very inadequate. To meet the needs of such instruction the University of Pennsylvania will introduce into its curriculum, beginning October 1, 1905, a course in public health including the following subjects: *Sanitary Engineering*, impressing the subject of water supplies, sewage system, street cleaning, disposing of waste, etc.: *Sanitary Legislation*, a study of the movement for sanitary reform, and of the laws enacted relating to public health, and the methods of enforcement employed in Great Britian and the United States; *Inspection of Meat, Milk and Other Animal Products*, the methods of preparation and preservation of the same, the conduct of dairies, creameries, etc., and demonstrations of the diseases of animals transmissable to man; *The Sanitary Engineering of Buildings*, including demonstrations of systems of heating, ventilation plumbing and drainage, the study of plans, etc.; *Social and Vital Statistics in the United States*, an examination of statistical methods and their results, with special reference to vital statistics and to city populations; *Practical Methods Used in Sanitary Work*, including water, air and milk analyses, studies in ventilation and heating, investigation of the soil, methods of disinfection, sterilization, etc.; *General Hygiene*, as applied to the community, including lectures upon the causation of disease—exciting and predisposing, methods of prevention—including isolation, quarantine, natural and acquired immunity, protective moculation, vaccination, and the antitoxic state, methods of house disinfection and the means employed, suggestions for the organization of sanitary work, the influence of water supplies and sewage disposal on the public health, etc.; *Personal Hygiene*, including the physiology of exercise, the adaptation of exercise to the various physical requirements, the use of exercise for the prevention and correction of deformities, the methods of examination and record keeping, the routine physical examination of growing children and the relation of air, food, bathing, etc., to health and development; the hygiene of the school room. Such instruction in our leading universities will do much for the public good. It will insure more efficient work by health officers, dignify this important branch of medical science.

SOCIETY FOR THE STUDY OF NARCOTICS.

The American Medical Society for the Study of Alcohol and Other Narcotics was organized June 8, 1904, by the union of the American Association for the Study of Inebriety and the Medical Temperance Association. Both of these societies are composed of physicians interested in the study and treatment of inebriety and the physiological nature and action of alcohol and narcotics in health and disease. The first society was organized in 1870 and has published five volumes of transactions and twenty-seven yearly volumes of the Quarterly Journal of Inebriety, the organ of its association. The second society began in 1891 and has issued three volumes of transactions and for seven years published a Quarterly Bulletin containing the papers read at its meetings. The special object of the union of the two societies is to create greater interest among physicians to study one of the greatest evils of modern times. Its plan of work is to encourage and promote more exact scientific studies of the nature and effects of alcohol in health and disease, particularly of its eiological, physiological and therapeutic relations. Second, to secure more accurate investigations of the diseases associated or following from the use of alcohol and narcotics. Third, to correct the present empirical treatment of these diseases by secret drugs and so-called specifics and to secure legislation, prohibiting the sale of nostrums claiming to be absolute cures containing dangerous poisons. Fourth, to encourage legislation for the care, control and medical treatment of spirit and drug takers. The alcoholic problem and the diseases which enter and spring from it are becoming more prominent and its medical and hygienic importance have assumed such proportions that physicians everywhere are called on for advice and counsel. Public sentiment is turning to medical men for authoritative facts and conclusions to enable them to realize the causes, means of prevention and cure of this evil. This new society comes to meet this want by enlisting medical men as members and stimulating new studies and researches from a broader and more scientific point of view. As a medical and hygienic topic the alcoholic problem has an intense personal interest, not only to every physician, but to the public generally in every town and city in the country. This interest demands concentrated efforts through the medium of a society to clear away the present confusion, educate public sentiment and make medical men the final authority in the consideration of the remedial measures for cure and prevention. For this purpose a most urgent appeal is made to all physicians to assist in making this society the medium and authority for the scientific study of the subject. The secretary, Dr. T. D. Crothers, of Hartford, Conn., to whom we are indebted for the above data, will be pleased to give any farther information.

PROFESSOR SHIBASABURO KITASATO.

Dr. Kitasato, of Tokio, Japan, the discoverer of the tetanus bacillus and of the bacillus of the Bubonic plague, recently visited this country, and attended the meeting of the "National Science Association," which met at St. Louis in the latter part of September.

After graduating from the Imperial University Medical College, Tokio, Dr. Kitasato was sent by the Japanese government to Germany to further prosecute his medical studies. His discovery of the cause of tetanus will make his name immortal. From an interesting sketch of his life we quote the following from the "Medical Age:"

"After his return to Japan he established the Institute for Infectious Diseases, the object of which is to investigate the cause of infectious diseases and devise prophylactic and curative methods. This institute was opened in 1892 to the public, and since that date it has been under Kitasato's control.

"In 1894, when plague broke out in Hongkong, the Japanese government appointed Professor Kitasato and his associates to proceed there and investigate the cause of this terrible disease, of which the world had hitherto had no practical knowledge. A few days after his arrival at Hongkong Professor Kitasato discovered the bacillus which was the cause of this disease. On account of this meritorious service to the state he was honored by His Majesty, the Emperor, with the Decoration of the Third Order of the Rising Sun. This valuable discovery made him the leading bacteriologist in the world.

"In 1896, under the instruction of the government, he established the Imperial Serum Institute, with the object of supplying serum of better quality to the general public. Since the establishment of this Institute he has been its director. The government appointed him the president of the Imperial Lymph Institute, which supplies the lymph universally used throughout the whole country.

"Professor Kitasato is at present the president of each of the three institutes above mentioned, which are under the supervision of the Minister of State for the Interior.

"Under the able direction of Professor Kitasato many valuable contributions have been made by these institutes for the benefit of medical science. For instance, we may point out (1) the discovery of the dysentery bacillus by his assistant, Dr. Shiga (Institute for Infectious Diseases), (2) the production, for the first time in the annals of the world, of the most effective pest serum (Serum Institute), and (3) the method of manufacturing non-humanized lymph, which is produced without passing through a human body (Lymph Institute).

"Professor Kitasato, besides, holds the following offices in the service of the government: Vicepresident of the Central Hygienic Association; adviser to the Sanitary Bureau, charged with the work of preventing the transportation of infectious diseases to Japan. He is also the president of the Japan Private Hygienic Society, and honorary member of the American Society of Tropical Medicine, and other scientific associations, domestic and foreign."

HOSPITALS FOR CONSUMPTIVES.

We find evidences on every hand of increasing efforts to provide sanitoria for consumptives. The State of Rhode Island has erected buildings for a state sanitorium in the town of Burrillville, which is the highest portion of the state, being 750 feet above the sea level. The tract includes 250 acres of timber land covered with a growth of large trees and hard wood. The buildings are on the ward system and provide for 120 patients. The buildings cost about $150,000. In Germany, the native land of the sanitorium, over $10,000,000 are invested in sanitoria for the treatment of tuberculosis, ninety of these institutions were shown by detailed plans and complete elevations and in some instances by paintings, at the World's Fair, at St. Louis. It is said that the most complete, beautiful, and hygienic exhibit at the fair was those of Germany, the cost of preparing and collecting this exhibit alone was over $10,000. It is evident that the German "loves to live, to have abundant health while he lives, and to save the life of his fellow men without regard to cost."

Educational.

EXAMINATION HELD BY THE OHIO STATE BOAD OF MEDICAL REGISTRATION AND EXAMINATION.

The last examination of the State Board was held December 13, 14 and 15, at Columbus, O. Forty-five candidates appeared for examination, of these forty-three passed and two failed. An average grade of 75 per cent. in all branches is required. Two osteopaths passed the examination in anatomy, physiology, physical diagnosis, and obstetrics. The following passed the examination:

William Powell, Cleveland; John L., Gorny, Toledo; Moses Scholtz, Cincinnati; L. K. H. Stoll, Cincinnati; C. C. Mann, Cleveland; C. N. Watkins, Ft. Recovery; C. H. Cale, Lore City; H. W. Chaney, Hillsboro; F. M. Dumas, Cleveland; L. L. Jones, Columbus; G. U. Bennett, Cleveland; W. F. Ong, Dillonsvale; Heikki Koljonen, Ashtabula; J. M. Hoskins, Marion; E. C. Brock, Washington C. H.; O. S. Roebuck, West Union; J. M. Bovd, Washington C. H.; P. W. Brown, Springfield; W. M. Luburgh, Springfield; W. G. Fitzsimmons, Steubenville; W. F. Lawton, Columbus; J. S. McCullough, Lore City; G. F. McKim, Cincinnati; Alex. Cruikshank, Hanoverton; F. H. Barr, Cleveland; B. C. Willis, Cincinnati; Giovanni Grossi, Youngstown; F. H. Mersfelder, Cleveland; W. J. Abbott, Cleveland; H. J. Brown, Ironton; W. T. Nelson, Cincinnati; L. H. Cox, Gallipolis; Caroline McQueston, Cleveland; Charles B. Messerly, Clarenton; J. D. O'Brine, Massillon; J. H. McHenry, Cleveland; Rose G. Barr, Cleveland; C. B. Moses, Portsmouth; C. R. Larkins, East Liverpool; W. G. Gates, Marysville.

Osteopaths—W. W. Hall, Kent; Anna E. K. Steitz, Grenville.

AVERAGE GRADES.

The college of graduation, serial numbers and average grade are given below. The year of graduation is 1904 unless otherwise designated:

Eclectic Medical College of City of New York (1899)...553, 81
Cleveland Homeopathic M. C........554, 80; 566, 79; 551, 81
Toledo Medical College, Toledo, Ohio...............555, 73
University of Toronto, Toronto, Canada (1901)........556, 94
Eclectic Medical Institute, Cincinnati, Ohio......... 557, 72
University of Southern California, Los Angeles (1903)..561, 94
Harvard University Medical School, Boston, Mass... 562, 93
College of Physicians and Surgeons, Baltimore (1902)..563, 84
Jefferson Medical College, Phila., Pa...568, 84; 564 (1903), 91
Rush Medical College, Chicago, Ill. (1900)............565, 86
Long Island Hospital College, Brooklyn, N. Y. (1902)..567, 90
University of Michigan, Ann Arbor, Mich. (1890)......569, 78
S. S. Still College of Osteopathy, Des Moines (1903)...570, 85
American School of Osteopathy, Kirksville, Mo....... 571, 82
Columbian University, Washington, D. C....527, 91; 527, 91
University of Virginia...........528 (1900), 94; 552 (1902), 83
University of Moscow, Moscow, Russia (1899)........529, 90
University of Munich, Munich, Ger. (1899)............530, 28
University of Buffalo, N. Y............531, 85; 531 (1895), 85
Ohio Medical University, Columbus..532, 91; 538, 79; 548, 75
Starling Medical Coll..533, 79; 541, 78; 543, 86; 545 (1903), 88
Hospital College of Medicine, Louisville, Ky. (1903)...534, 81
Detroit Medical College, Detroit, Mich............. 535, 77
Howard University, Washington, D. C.536, 78; 559, 88 560, 84
Western Reserve University, Cleveland (1883)........537, 83
Amperial University, Helsingfor, Findland (1903)......539, 80
Kentucky School of Medicine, Louisville,Ky......... 540, 82
University of Louisville, Ky.................542, 90;558, 80
Barnes Medical College, St. Louis, Mo. (1899)........544, 83
Baltimore Medical College, Baltimore, Md.......... 546, 91
Tuft's Medical School, Boston, Mass. (1903)..........547, 84
Medical College of Ohio, Cincinnati, Ohio.......... 549, 88
McGill University, Montreal, Can. (1895).............550, 81

The graduates of Ohio medical colleges attained the following grades: Medical Col. of Ohio (one), 88; Western Reserve (one), 83; Starling Med. College (four), 82.75; Cleveland H. Med. Col. (three), 82.33; Ohio Med. University (three), 81.66; Toledo Med. College (one), 75.

STATE EXAMINATION QUESTIONS.*

December 13, 14, 15, 1904.

Anatomy—1. Name the bones of the skull. 2. Name the muscles of the forearm. 3. Describe the structure of the elbow joint. 4. In operating for hernia, what structures would be cut? 5. Describe the structure of the eyeball. 6. Give origin and distribution of the Musculo-spiral nerve. 7. Describe the Ileo-cecal valve. 8. What bones and ligaments form the ankle joint? 9. Give origin, course and termination of the thoracic duct. 10. Describe the hemorrhoidal veins, their origin and distribution.

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* Kindly furnished by Dr. C. N. Watkins, Ft. Recovery, O.

Surgery—1. Define inflammation and describe its stages. 2. Describe two surgical diseases of bone. 3. Classify curvature of spine and give treatment. 4. Give surgical anatomy of inguinal hernia. 5. Give differential diagnosis of septicemia and pyemia. 6. How would you administer an anesthetic? 7. How are fractures and dislocations diagnosed? Give their general treatment. 8. When would you advise prastatectony? 9. Give symptoms and treatment of pyothorax. 10. How would you treat sprains?

Physiology—1. What is the difference between striated and non-striated muscles? 2. What is a nerve plexus and what purpose does it serve? 3. What are proteids and what are some of their properties? 4. Define blood pressure and give its cause. 5. What causes coagulation of the blood? 6. What is the function of the posterior column of the spinal cord? 7. What is the sympathetic nervous system and what is its function? 8. What is the office of the medulla? 9. What office does the saliva perform in the digestion of the food? 10. Describe the secretions of the stomach.

Physical Diagnosis—1. What causes the Argyll-Robertson pupil? What does its presence signify? 2. What is vocal fremitus, how is it obtain and what does it indicate? 3. Describe irregular pulse, its varieties and its significance. 4. State the exact area of the apex beat and the diagnostic importance of its displacement. 5. Describe thrill and friction fremitus and what causes them. 6. Describe dry rales, from what are they originated and what do thev signity. 7. What is reduplication of heart sounds and from what is its produced? 8. How can we determine the outline of the normal stomach by auscultatory percussion? 9. State the physical signs of the presence of fluid in the peritoneal cavity. 10. What are the physical signs which give the idea of the presence of carcinoma of the stomach?

Diseases of Women—1. Name and describe two diseases of the vulva. 2. Name and describe two diseases of the vagina.

3. Name and describe two diseases of the uterus. 4. Name and describe two diseases of the female mammary glands. 5. Name and describe two diseases of the urethra.

Diseases of Children—1. Give synonyms of (a) herpes zoster, (b) acne, (c) urticaria, (d) psoriasis, (e) nevus, (f) furuncle. 2. Give some of the best substitutes for mothers' milk. 3. Describe the dentition of children. 4. What are the causes, symptoms and treatment of cholera infantum? 5. Give diagnosis and treatment of diphtheria.

Obstetrics—1. Describe the decidua vera, decidua reflexa and decidua serotina. 2. What are the functions of the amniotic fluid and its probable source? 3. Name three positive signs of pregnancy available in the sixth month. 4. What evidence gained from external examination will warrant a diagnosis of L. O. A.? 5. What causes external rotation? To which side will rotation take place? 6. In breech presentation which hip rorates to the public arch? 7. What causes after pains? Why do they increase in severity with subsequent confinements? 8. What is ophthalmia neonatorum? How may it be prevented? 9. How manage head in breech presentation when it has lodged behind the public arch? 10. How treat eclampsia in the second stage of labor?

Materia Medica and Thearpeutics—1. Define alkaloids and state what properties they possess in common. 2. How do coal tar antipyretics depress temperature? 3. Describe the action of digitalis upon the heart and give some indications for its use. 4. From what is salol obtained? Give some indications for its use, the form and dose that should be given. 5. Write a prescription containing some vegetable bitter with iron. 6. Describe the effects of chloral, sulphanol and trianol. 7. What derivative of opium is used as an emetic? How is it employed and how does it produce vomiting? 8. How do the vegetable cathartics differ from the saline cathartics in their action? 9. Name three drugs used to reduce arterial tension. 10. Name some drugs which are used to increase arterial tension.

Chemistry—1. (a) How would you define an atom? (b) What is molecular weight? (c) What do you underestand by a molecule? 2. Define the terms (a) crystal, (b) amorphous, (c) isomorphous. 3. Give common names of (a) potassium bitartrate, (b) lead acetate, (c) sodium bicarbonate, (d) sodium carbonate, (e) potassium sulphide. 4. Give the chemical names for tartar emetic, cream of tartar, Glander's salts, copperas and sugar of lead. 5. Give tests HgCl, $AgNO_3$. Describe H_2SO_4. 6. What is the antidote for the poisoning by arsenic? For poisoning by lead acetate? 4. What are the chemical antidotes to be used in poisoning by corrosive sublimate and by carbolic acid? 8. Give specific gravity of urine, reaction and tests for albumin and sugar. 9. Milk—chief constituents, what adulterants are most common and how would you detect an adulterant? 10. What ordinary test would you use for organic matter in potable water

Practice and Pathology—1. What is cirrhosis of the liver, its cause and treatment? 2. Give symptoms, diagnosis and treatment of acute gastritis. 3. Give differential diagnosis of acute tuberculosis and typhoid fever. 4. What are the causes, pathology and treatment of exophthalmic goiter? 5. What are some of the modern views of the pathology of rheumatism? 6. Give causes, symptoms and treatment of chorea? 7. How would you distinguish follicular tonsillitis from diphtheria? 8. Of what diseased conditions may albuminuria be a symptom? 9. Give symptoms and diagnosis of cerebral hemorrhage. 10. Diagnose and treat a case of renal colic.

Medical News Notes.

Dr. C. D. Dennis is ill with typhoid fever at his home on Rich street.

Dr. Theo. F. Davidson is very seriously ill at his home in the Gayforth, this city.

Dr. P. D. Shriner has been reappointed for a term of five years as member of the Columbus Board of Health.

The Licking County Medical Society at its January meeting adopted a fee bill which provides for uniform charges for medical services.

Drs. H. B. Blystone, W. S. Cole, G. H. Schauweker, and G. T. Meek have been reappointed for one year as district physicians for this city.

For Sale—A good practice in fine location; also an excellent horse and a doctor's transformable coupe. 1143 S. Main St., Akron, Ohio.

According to Chicago's bulletin of the Health Department upwards of 270,000 vaccinations have been performed in that city since October 1.

Professor Orth, the Kaiser's surgeon, is making a tour of the United States. He is considered one of the most eminent pathologists in Europe.

It is reported that Dr. L. Francis Barker of Rush Medical College, Chicago, is likely to become Professor Osler's successor at Johns Hopkins University.

DONATIONS TO HOSPITALS.—The Childrens Hospital of this city, and the Columbus Home for the Aged have each come into possession of about $250,000 by the will of the late W. W. Franklin, of Lancaster.

The Civil Service Commission has decided that hereafter persons suffering from consumption shall not be employed in the postoffice or in any other government position from which they are likely to spread the disease.

Drs. Frank Warner, president; C. O. Probst, secretary, and E. G. Horton, bacteriologist, of the State Board of Health, attended the meeting of the American Public Health Association which met in Havana, Cuba, Jan. 9-13, 1905.

A room in the new Carnegie library is to be set aside for medical books and medical journals, with space for reference tables. It will contain several thousand volumes and be open to the local profession, medical students and visiting physicians.

Wanted—To exchange a splendid practice, no real estate, in a town of 1,500. Splendid roads, good schools and churches, and excellent advantages for a practice or introduction in Columbus. Address "Doctor," care Columbus Medical Journal.

FILTRATION AND SOFTENING PLANT.—At the last election the proposition for the issuance of $1,200,000 in bonds for the construction of a filtration plant in Columbus was carried and plans for the same have been approved by the Local Board and the State Board of Health.

Honorable Frank Wells, President of the Michigan State Board of Health, died January 19th. The Michigan State Board of Health passed appropriate resolutions. Dr. Wells for fourteen years has been a member of that Board of Health and twelve years its President. He has rendered valuable services to the Board and through it to the people of Michigan, in the advancement of sanitation and public health.

CANTON MEDICAL SOCIETY.—The Canton Medical Society held its fourth anual banquet at the McKinley hotel, Canton, Ohio, Jan. 27. Dr. D. F. Banker, president; Dr. C. A. Crane, secretary. The banquet was preceded by an address on The American Doctor, by Dr. C. A. L. Reed of Cincinnati. Toasts were responded to by Drs. Edwin Ricketts, Cincinnati; Robert A. Biechele, Canton; C. A. L. Reed, Cincinnati; Chas. F. Aldrich, Cincinnati.

COLUMBUS MORTALITY REPORT FOR JANUARY, 1905.—Typhoid fever, six deaths; diphtheria and croup, seven; septicemia, one; tuberculosis—pulmonary, twenty, meningeal, one, abdominal, one; cancer, four; meningitis, three; cerebral hemorrhage, six; paralysis, unspecified cause, four; convulsion in children, twelve; organic heart disease, twelve; broncho-pneumonia, four; pneumonia, twenty-three; peritonitis, three; nephritis, nine; senile debility, six; affections from external causes, three; other causes, twenty-two; total, one hundred and forty-nine.

At the last meeting of the Columbus Academy of Medicine, the following committees were appointed to make arrangements for the meeting of the State Medical Association to be held in Columbus in May: Accommodation, C. F. Turney, H. M. Platter, Frank Winders, Sherman Leach; entertainment, J. H. J. Upham, J. E. Brown, Starling Wilcox, Frank Warner, and Yeatman Wardlow; exhibits, F. W. Blake, Van Der Veor Taylor, W. D. Deuschle, W. Teachnor, S. J. Goodman; finance, H. W. Whittaker, C. S. Hamilton, G. M. Waters, P. D. Shriner, C. W. McGavran and E. J. Emerick.

THE SMALLPOX SITUATION IN OHIO.—According to the *Ohio Sanitary Bulletin*, there has been a marked falling off in the number of cases of smalpox reported during the summer and fall of the present year. For the five months ending Oct. 29, 1904, there were 558 cases and 1 death, (443 of these cases and the death occurred during June and July) while for the same period in 1903, 1115 cases were reported and 40 deaths. There has been a slight increase in the number of cases for the last four or five weeks, and we may expect a further increase for the winter months. Health authorities should everywhere be on the alert for first cases, the proper handling of which will prevent an extensive outbreak.

MEETING OF THE STATE AND LOCAL BOARDS OF HEALTH.—At the fifteenth annual meeting of the State and Local Board of Health held in Columbus, January 27 and 28, the following program was acrried out: January 27, 10:30 a. m.—Address by President Frank Warner, Columbus; "The Laboratory in the Diagnosis of Diphtheria," Mr. E. G. Horton, bacteriologist State Board of Health, Columbus; discussion, question box. 1:45 p. m. —"Quarantine of Observation in Prevention of Smallpox," Dr. H. M. Platter, inspector of infectious diseases, Columbus; discussion; "The Sewage Testing Station at Columbus," Mr. George A. Johnson, engineer in charge, Columbus; visit to the sewage testing station. 7:45 p. m.—"Filtration of Public Water-Supplies," Mr. R. W. Pratt, engineer State Board of Health, Columbus; discussion; "The Relation of the Medical Profession to the Restriction of Tuberculosis," Dr. S. P. Wise, ex-member State Board of Health, Millersburg; discussion; "Disposal of Garbage and Refuse," Col. W. F. Morse, sanitary engineer, New York. January 28, 9 a. m.—"The Conflict Among Legislative Bodies a Hindrance to Sanitation," Dr. Mark Millikin, health officer, Hamilton; discussion; "The Sanitary Organization of 1905," Dr. J. W. Clemmer, member Board of Health, Columbus; discussion; "Should We Have County Health Officers?" Dr. F. E. Kitzmiller, health officer, Piqua; discussion. The attendance was good and the papers excellent.

BANQUET TO DR. E. J. MCCOLLUM.—On the occasion of the completion of fifty-one years of practice by Dr. E. J. McCollum in Seneca County the medical society of that county honored him with a banquet and a loving cup. The occasion was made the more enjoyable by the presence of the wives, families and the sweethearts of the members of the society. At the usual hour the President, Dr. George L. Hoege, called the society to order around the banquet table, and introduced the first orator of the evening, Dr. George P. Williard, who welcomed the guests and very eloquently congratulated Dr. McCollum in his arrival at and in passing the half-century stone in the practice of medicine, and at the conclusion of his remarks he, in behalf of the members of the Seneca County Medical Society, presented to Dr. McCollum a handsomely engraved loving cup. After a brief statement of his appreciation of the token of respect from the profession, the doctor filled the cup with punch and from it each drank to the doctor's health. After partaking of the repast prepared by our committee the following toasts were responded to in the usual good spirit of our profession: "The Medical Society," by the President, Dr. George L. Hoege; "Our Wives and Sweethearts," Dr. H. L. Wenner; "The Doctor's Horse," Dr. W. H. Focht; "The Doctor's Gig," Dr. C. T. Benner; "The Shortcomings and the Longcomings of the Doctor," by H. B. Gibbon. After enjoying a smoker, and those who desired tripped the "fantastic toe," the society adjourned, all feeling that the time had been well spent, and wishing the doctor many a return of these social functions. We are happy to report that the interest in our medical society continues and our attendance is good, and while the discussions are animated and instructive they are in the most cordial manner.

NORTHWESTERN OHIO MEDICAL ASSOCIATION.

The sixtieth meeting of Northwestern Ohio Medical Association was held at Tiffin, Ohio, Thursday and Friday, December 15 and 16, 1904, H. B. Gibbon, President; A. S. Rudy of Lima, Secretary. E. L. Tupper of Ottawa, read a paper on "The False Security of Physicians in the Use of Pharmaceutical Combinations," which was discussed by S. B. Hiner, Lima; C. E. Beardsley, Ottawa; D. W. Steiner, Lima; W. S. Philips, Belle Center. Dr. D. W. Steiner of Lima presented a paper on "When to Operate in Appendicitis." This paper was discussed by C. W. Moots of Delphos, C. E. Beardsley of Ottawa, S. B. Hiner of Lima, and C. T. Benner of Tiffin. Dr. G. F. Willard of Tiffin read a paper on "Spinal Injuries," and Dr. T. M. Gehrett of Tiffin on "Conservatism vs. Laminectomy in Fractures of the Spinal Vertebra," which were discussed by D. W. Steiner, Lima; H. L. Wenner, Tiffin; C. H. Porter, Tiffin; C. W. Moots, Delphos. "The Influence of Defective Vision and Nasal Obstruction on Mental Development" was the subject of a paper read by Dr. E. H. Porter of Tiffin, which was discussed by F. L. Bates, Lima; C. Lukens, Toledo. C. W. Moots of Delphos presented the subject of "Hemorrhoids." Dr. J. A. Duncan of Toledo took part in the discussion. Dr. J. H. Jacobson of Toledo read a paper on "Medical Surgical Aspects of Gastro Duodenal Ulcerations." Drs. W. H. Gillet and E. J. Greenfield of Toledo took part in the discussion. Dr. Greenfield read a very interesting paper on "Gall Stones and the Medical Treatment." The subject was further discussed by W. A. Dickey, Toledo; W. H. Gilletts, Toledo; M. Stamm, Fremont; J. H. Jacobson, Toledo; J. C. Martin, Findlay. In the evening a five-course dinner was served. This was followed by a vocal solo by Mrs. H. L. Wenner of Tiffin, and an address by

Dr. Dan Millikin on the "Curse of Genius." Following the address, Miss Meyers of Tiffin sang a solo.

On Friday morning Dr. Longfellow presented the subject of "Blood Examinations as a Diagnostic Factor," which subject was further discussed by Dr. M. Stamm, Fremont; W. A. Dickey, Toledo. Dr. C. E. Beardsley of Ottawa read a paper on "Fourth of July Accidents and Their Results," which subject was discussed by S. B. Hiner, Lima; D. W. Steiner, Lima; M. Stamm, Fremont; W. Dickey, Toledo. "Diagnosis and Treatment of Pelvic Inflammatory Diseases" was the subject of a paper by Dr. J. F. Fox; discussion by Dr. M. Stamm and D. W. Steiner. Dr. W. A. Dickey of Toledo read a paper on "Brain Hemorrhage," which was discussed by C. I. Benner and C. W. Moots, Delphos.

The annual election of officers resulted as follows: President, I. M. Gehrett, Deshler; Vicepresidents, F. L. Bates, Lima; A. F. Cook, Sandusky; Secretary, A. S. Rudy, Lima. The meeting was largely attended and in every way a successful and profitable one. The next meeting of the Association will be held in Fremont, 1905. We are indebted to Dr. F. D. West for the above report of the meeting.

Recent Medical Books.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE, by George M. Edebohls, A. M., M. D., LL. D., Professor of the Diseases of Women in the New York Post Graduate Medical School and Hospital; Consulting Surgeon to St. Francis Hospital, New York, etc. Publishers, Frank F. Lisiecki, 9-15 Murray Street, New York City, N. Y. 1904.

This book is a timely contribution to the subject of the Surgical Treatment of Bright's Disease. The procedure is still in the stage of evolution and information is eagerly sought after by the profession. The author's various contributions to the literature of the subject, with considerable new matter constitutes the text of this work.

SIMON'S PHYSIOLOGICAL CHEMISTRY. A Text-Book of Physiological Chemistry. For Students and Practitioners of Medicine. By Charles E. Simon, M. D., late Resident Physician, Johns Hopkins Hospital; author of Simon's Clinical Diagnosis, etc. New (2d) edition. Revised and enlarged. Octavo, 500 pages. Cloth, $3.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Dr. Simon has here treated Physiological Chemistry in a manner adapting his work to the wants of the medical student, and of the physician who has previously been unable to devote to the subject the attention which it merits. It deals with foods, their origin, classed and decomposition products, their digestion, resorption and excretion, the chemistry of the tissues and organs of the body, the substances resulting from their activity and their relation to physiological function. The early call for a new edition has enabled the author to include the results of the very active research in this field to date. The chapters on the Albumins, Nitrogenous, Katabolism, and Gastric and Tryptic Digestion have been rewritten. To render the work still more useful both to students and teachers, laboratory exercises have been added. The methods have been described in such detail that the student should find no difficulty in performing the experiments.

THE MEDICAL NEWS VISITING-LIST. 1905. Philadelphia and New York. Lea Brothers & Co.

The Medical News Visiting Lists for 1905 are made of good paper, neatly bound and contain much valuable information. Besides the daily record for the year, it also contains several pages devoted to each of the following subjects: General Memoranda, Obstetric Engagemnts and Practice, Vaccinations, Death Register, Addresses of Patients, Addresses of Nurses, Cash Account.

A TEXT-BOOK OF MATERIA MEDICA: Including Laboratory Exercises in the Histologic and Chemic Examinattions of Drugs. For Pharmaceutic and Medical Schools, and for Home Study. By Robert A. Hatcher, Ph. G., M. D., Instructor in Pharmacology in Cornell University Medical School of New York City; and Torald Sollmann, M. D., Assistant Professor in Pharmacology and Materia Medica in the Medical Department of the Western Reserve University of Cleveland. 12mo volume of about 400 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Flexible leather, $2.00 net.

Students of medicine, as well as pharmacy students, will undoubtedly welcome this work on Materia Medica. Part I comprises a guide to the study of crude drugs, both official and unofficial; while in Parts II. and III. the histologic and chemic examinations of drugs are considered in a scientific, yet clear and simple manner. All the histologic descriptions are supplemented by laboratory exercises of important drugs, so that the student becomes insensibly acquainted with their construction. Throughout the entire work general stress is laid on the recognition of adulterations. We can strongly recommend this work as reliable, practical, and excellent in every way.

THE PERPETUAL VISITING AND POCKET REFERENCE BOOK, Including information in emergencies from standard authors. St. Louis, Mo. Dios Chemical Company, Publishers. 1904.

This convenient weekly calling list is of small size, neatly bound in flexible cover and containing the usual record blanks together with complete calendars for 1904 and 1905.

THE PHYSICIAN'S VISITING LIST. Lindsay & Blakiston's, for 1905. Fifty-fourth Year of its Publication. The Dose-Table herein has been revised in accordance with the new U. S. Pharmacopæia (1900). Philadelphia: P. Blakiston's Sons & Co. (Successors to Lindsay & Blakiston), 1012 Walnut Street.

We take pleasure in recommending the above visiting list as one of the most convenient of its kind.

ESSENTIALS OF NERVOUS DISEASES AND INSANITY: their Symptoms and Treatment. By John C. Shaw, M. D., late Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School. Fourth Edition, Thoroughly Revised. By Smith Ely Jelliffe, Ph. G., M. D., Clinical Assistant, Columbia University, Department of Neurology; Visiting Neurologist, City Hospital, New York. 12mo volume of 196 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, $1.00 net.

Of the progress made in every branch of medicine during the last few years, none has been more prominent than that considering diseases of the nervous system and of the mind. Quite a commendable change in arrangement from the 3d edition is the grouping of subjects in such a way as to bring out the natural relations of affiliated nervous disorders. This will be found of great service to the student. In the section on disorders of the mind, the general views of such leading psychologists as Ziehen, Weygandt, Kaepelin, Berkeley and Peterson have been carefully weighed. This new fourth edition is well worthy our recommendation, and we give it most heartily.

DAVIS'. OBSTETRICS. New (2d) Edition. A Treatise on Obstetrics. For Students and Practitioners. By Edward P. Davis, A. M., M. D., Professor of Obstetrics in Jefferson Medical College; Professor of Obstetrics and Pediatrics in the Philadelphia Polyclinic, etc. New (2d) edition, thoroughly revised and much enlarged. Octavo, 800 pages, with 274 engravings and 39 full-page plates in colors and monochrome. Cloth, $5.00, net; leather, $6.00, net.

From a practical standpoint this work is all that could be desired. Dr. Davis has furnished a thoroughly scientific and brilliant treatise on Obstetrics. His method is original and comprehensive, and the scope of the work includes cognate subjects of great importance which are not met in other books on the subject. In preparing this new edition, Professor Davis has subjected it to a complete rewriting throughout, resulting in an enlafgement of about two hundred and fifty pages. Together with the established principles and practice of Obstetrics he has incorporated the latest additions to our knowledge of the subject, which promise to be of permanent value. In its new farm it accordingly represents the science and art of Obstetrics to the date of issue. The work has always been notable for the abudance and instructiveness of its illustrations. The series has been revised equally with the text, and any engravings or plates susceptible of improvement have been replaced.

HOW TO COOK FOR THE SICK AND CONVALESCENT. Arranged for the physician, trained nurse and home use by Helena V. Sachse, second edition, revised and enlarged. Publishers, J. B. Lippincott Company, Philadelphia, Pa. 1904.

The careful preparation of food is now recognized to be of vital importance to an invalid and a valuable assistance, in many cases, to the physician in hastening the recovery of a patient. Scientific information along this line will be welcomed by the profession. The author has given in this little book many practical hints and a number of valuable recipes. We can heartily recommend the book to nurses and physicians.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, comprising ten volumes on the year's progress in medicine and surgery, issued monthly under the general editorial charge of Gustavus P. Head, M. D. Year Book Publishers, 40 Dearborn Street, Chicago, Ill. Vols. VIII, IX and X.

Vol. VIII. July number is on Therapeutics, preventive medicine, Climatology and Forensic Medicine.

Vol. IX. August number is devoted to Physiology, Pathology and Bacteriology, by Evans and Gehrman.

Vol. X. September number gives the regime of skin and venereal diseases and nervous and mental diseases. The first written by Baum, the second by Patrick.

DUDLEY'S GYNECOLOGY. New (4th) Edition. A Treatise on the Principles and Practice of Geecology. By E. C. Dudley, A. M., M. D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (4th) edition. Revised and enlarged. Octavo, 771 pages, with 401 illustrations, of which 50 are in colors, and 18 full-page colored plates. Cloth, $5.00, net; leather, $6.00, net; half morocco, $6.50, net.

The author states that in accordance with the original plan of this book he has arranged the subjects so far as practical in pathological and etiological sequence. For example, infections and inflammations are brought together so that vulvovaginitis, metritis, salpingitis, ovaritis, peritonitis and cellulitis may be studeide in combined forms which they ordinarily assume. In like manner, tumors are treated in another part, traumatisms in another and displacements in another. The arrangement seems logical and practicable. Under this plan the reader has constantly before him the physiological and pathological unity of the reproductive system. A thorough going revision has been made including recent advances in Gynecology. This has necessitated rewriting and rearranging many chapters.

One of the most notable features is the introduction of more than 300 new illustrations all reproduced from drawings especially made for the book. Another notable feature and one that is very important to the reader, all minor and major manipulations and operations have been illustrated to show the several proceedures as they take place step by step, each operation being set forth in a series of drawings. For the student of gynecology this is a most practical work.

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THE TREATMENT OF ACUTE NON-SUPPURATIVE OTITIS MEDIA.*

BY EDWIN PYNCHON, M. D., CHICAGO,

Professor of Rhino-Laryngology and Otology, Chicago Eye, Ear, Nose and Throat College.

Under the title given may be included the several acute inflammatory manifestations of the middle ear structures which have been described by various authors as respectively: acute myringitis, tubal salpingitis, acute catarrhal otitis, otitis media acute, etc., all being closely related, and in fact rapidly merging one into the other, so the chief consideration in treatment is as to stage or degree.

Owing to the frequency with which acute or catarrhal otitis media occurs, particularly during child life, being usually described as "earache," and so often due to adenoids (1), its prompt and correct treatment is of the greatest importance in order not only to relieve the annoying symptom of pain, but also in order to avoid those more serious sequela which may otherwise follow.

Certain patients are prone to attacks of acute ear trouble, while others are never thus afflicted. As all are alike subjected to practically the same exposures or climatic conditions, it becomes apparent that such susceptibility must, in a great measure, be due to local troubles present in those patients thus afflicted.

Chronic inflammation of the Schneiderian membrane, extending through continuity of tissue to the eustachian tube, is an important etiological factor to be considered and, in a general way, defective nasal respiration associated therewith, whereby the nasal secretion, instead of being evaporated, is retained, so through deterioration it causes or intensifies the chronic inflammation alluded to. In the very young, enlarged tonsils and adenoids can be justly credited with being the almost invariable causes of the obstruction, which accounts for the defective nasal respiration, while in older patients intranasal hypertrophies, or intumescence from local or systemic causes, are often additionally present. Foreign bodies in the nose may be a cause of nasal occlusion or infection at any age, as well as traumatism, and particularly the use of powerful styptics, as Monsel's solution, upon intra-nasal tampons in order to control post-operative hemorrhage. Acute otitis media may also result from traumatism of, or inward extension of inflammation from, the external auditory canal or it may occur as an acute eruption of a chronic suppurative otitis media with perforated m. t. (2).

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*Read before the American Academy of Ophthalmology and Oto-Laryngology at Denver, August 24-26, 1904.

Acute catarrhal otitis media has been, by different authors, discussed conjointly with the acute suppurative condition. While the acute form of middle ear inflammation may, up to a certain stage, be regarded as "non-suppurative," it is a fact conceded by nearly all writers that pathogenic invasion into the middle ear is an ever-present factor (2, 3) and that the degree of virulence from such invasion is tempered by the character or combination of varieties of organisms present (4, 5), as well as by both the amount of infective material introduced and the resisting power of the patient. The natural collection of infective material about the tubal orifice is largely due to the structural formation of the post-nasal space, as well as to the proximity of this orifice to Luschka's tonsil which, when either hypertrophied, or in that not infrequently observed condition of degenerative atrophy, becomes an ideal culture field for pathogenic organisms. Attention must also be called to the supra-tonsillar fossa, the infective material in which, beginning with early adult life, is in different ways a factor to be remembered. It has also been granted that defective teeth may have an important causative relationship (6).

Owing to the short and open eustachian tube in child life the chance for ingress of pathogenic material, so freely available from the ever-present adenoid growth, is increased, hence middle-ear trouble in young children may be generally regarded as suppurative, even though there may exist no rupture of the m. t. or external discharge, owing to the short and more patulous e. t., and in fact, after such infection, an unrecognized suppurative otitis may for months continue, the escaping and swallowed secretion from which is the cause of persistent gastric disturbance (1, 7). In such case the pain is regarded as neuralgic and the recurrent febrile disturbance is too often accredited to "teething."

The causative factors have been thus cited, as it is the duty of the attending physician, after the subsidence of an acute ear trouble, to advise as a prophylactic step the removal of all obstructive or contaminating tissues present in the upper air passages, and thereby correct the defective nasal respiration so as to avoid the tendency to recurrence of acute ear troubles.

In the development of an acute otitis media, there is first a brief stage of intra-tympanic rarefaction, owing to tubal stoppage, with the m. t. retracted, whereby, owing to negative pressure, serous or hemorrhagic exudate in the middle ear is induced, which in turn, through imprisonment, soon causes pressure with a bulging drum head, and may be considered a second stage. As the secretion is retained, it becomes more viscid.

Among the symptoms of acute middle ear trouble, pain may be regarded as the most important, though it is not always present, and is more liable to be of brief duration in young children, owing to the shorter and relatively wider e. t., whereby an exit of the middle ear secretion is more readily secured than with adults. Subjective sounds and reduced hearing acuity with fullness of ear are promptly noted by adults, though rarely complained of by children. In adults autophonia is commonly reported, and vertigo occasionally, while delirium and convulsions are chiefly manifested in children. In all cases there is some febrile reaction, which in children may be quite pronounced, constituting the most important symptom. In fact fever when of sudden development, particularly in children, may at any time suggest ear trouble (2).

Among the exciting causes the exanthemata and grippe are of the most importance from a numerical standpoint, though typhoid, acute nephritis and pneumonia must be mentioned. When grippe is the cause, there seems to be an increased danger of serious otitic infection. Another common exciting cause is the getting of water in the post-nasal space while bathing, or from the improper use of a nasal douche, in which case the water entering the e. t., carries in micro-organisms from its entrance (2). In fact, any exposure which results in coryza may cause an acute ear trouble, particularly when vigorous sneezing occurs, or when the nose is too vigorously and incorrectly blown.

In acute catarrhal otitis the element of pain, in the first stage, is due to the forced process of exudation from sudden rarefaction, which explains how the escape of a very minute quantity of fluid after a paracentesis may give such prompt relief, while later, in the second stage, it is due to intratympanic pressure and bulging of the drum head from the imprisoned secretions, which are augmented by the inflammatory process. With this understanding, it becomes apparent how promptly resolution will follow if in the early stage the imprisoned secretion can be released, so air wil be substituted for fluid in the tympanum. The natural process whereby a spontaneous cure often occurs is from absorption so, through subsidence of the swollen tubal m. m., a vent is given to the imprisoned secretion, and incidentally an entrance for air.

The ideal treatment, therefore, in this condition, when possible to be employed, is the prompt and early use of the intra-tympanic air douche. Inflation for this purpose has been both praised (8, 14) and condemned (3) by different writers, though all appreciate the fact that a cure can be facilitated by the re-establishment of tympanic drainage and the restoration of atmospheric equilibrium. The question is, how may this be safely and readily accomplished. The tube being stopped, an increased pressure is required, particularly by the method of Politzer, in order to pass the obstruction, and in fact with the necessary pressure required in order to effect Politzerization, the fluid in the tympanum may be driven into the mastoid cells, or the drum head ruptured. Furthermore, infective material from the tubal entrance may thus be driven through to the tympanum so the patient is subjected to both intense pain and the danger of further infection. With this view, it is not strange that many writers should decry the use of the air douche and should instead advise paracentesis whereby is imitated nature's alternate plan of termination when resolution fails.

The attempts at inflation which have been decried have, I believe, always been intermitting impacts, and when of enough power to pass the obstructed tube have often caused the undesirable phenomena previously cited. In acute intestinal obstruction, as from intussusception, intermitting douches, where the fluid is allowed each time to escape, have proved ineffective, and even harmful, while the constant stream, with intermitting halts, but no escape, has passed the obstruction and given relief (9).

In a previous paper, presented before this association six years ago (10), I described a method of inflation based upon the philosophy outlined in the preceding paragraph, it being a method whereby I have on several occasions successfully aborted an acute catarrhal otitis. As I have not since learned of others putting in practice the method described, I fear it failed to catch the eye, as well as the ear, of otologists generally.

The method alluded to, in brief, consists of the use of a constant in place of the intermitting air current, having at hand means for absolutely controlling and regulating the air pressure (10), and always employing a catheter, and using a vapor or nebula in place of plain air, for it must be a poor nebula indeed that is not better and more aseptic than unmedicated air.

The philosophy of this method is based upon the fact that as the vapor enters the tube it proceeds to the point of obstruction, and then retreats along the path of entrance, hence there is both a constant in-going and out-going current which *cleanses the tube of secretion*, particularly about the orifice. The continuous action of the air current is naturally most intense at the point of obstruction, so between its action, and the effect of the medicament employed, the obstruction is shortly passed, and the patient experiences a bubbling in the ear, which is also heard by the operator through the ausculation tube. I begin with about a six-pound pressure, and gradually increase it to even fifteen pounds, or until an entrance is effected. In these acute conditions I have found a chloroform vapor to be most effective. After the obstruction is passed, I have the patient tilt the head so the affected ear is uppermost, and allow the constant stream, with occasional breaks, to enter the middle ear for possibly a minute or so. In the selection of a catheter, I prefer one of silver with a bulbous tip, and am particular that the distal opening shall, for a short distance, be reamed out and made conical or rounded, so as to have no angular edge, or in other words, so the opening will be rounded inwardly, as is the outer bulbous end rounded outwardly.

I have also a suggestion to make relative to the introduction of the catheter. The mehtods usually advised require the touching of the point of the catheter against the posterior pharyngeal wall, or else against the upper surface of the soft palate, either of which steps will often cause retching. My method is to introduce the catheter in the usual manner, but with a slight rotating pressure of the dependent point of the catheter against the septum, as it is gradually entered, until the posterior end of the septum is reached, when, owing to the rotating pressure, the curved end tips up to the horizontal, when the catheter point, by being rotated downwardly, or in the opposite direction about 180 degrees, will enter the Eustachian orifice. In the case of a sensitive nose, I precede the introduction of the catheter by a brief application of cocaine to the septum and tubal orifice.

If the first treatment is given in the forenoon, I advise a repetition in the afternoon, and again daily for the next day or two, though I have in several cases had a complete cessation of all pain after one treatment. For patent ressons, the treatment outlined can only be employed with patients who can visit the office, and with adults, or those resolute enough to permit the introduction of the catheter. In all other cases the treatment of election is the employment of heat. Tobacco smoke has often been blown in the external ear with benefit, though, with our modern office equipment, much better methods are available for the use of heated air. For the past two years I have been using a Seeley hot air apparatus, made by F. A. Hardy & Co., of Chicago., which I have found to be both efficient and convenient to use. Another device which I have found of particular value in effacing the lame feeling or soreness about the ear, which can be used during office treatments, is a mechanical masseur. I have for some time been using a cleverly constructed device of this kind, operated by compressed air, being both small in size and of ample power, and made by the Globe Nebulizer Co., of Battle Creek, Mich.

Generally speaking, in the treatment of acute ear inflammations, hot aqueous douches are, for many reasons, to be preferred. For several years, in such cases, I have depended largely upon the frequent employment of a hot one per cent. carbolized douche, to be used at least every two hours, while during the interval dry heat is continuously applied with the aid of a Japanese hot box. In order that the douche will be properly used, I give the patient a printed sheet of directions, of which the following is a copy:

"DIRECTIONS FOR THE USE OF INJECTIONS IN THE EAR.

"Dissolve one teaspoonful of carbolic acid in a teacupful of hot water, and stir with a teaspoon until thoroughly mixed or dissolved. Then add enough warm water to make one (1) pint. It should, when used, be as warm as can be comfortably borne by the car. The best kind of a syringe to use is a fountain syringe, of not less than the No. 2 size, which holds one quart. Put in the bag the warm solution which has been prepared and hang the bag as high as the top of a door, so that when the patient is seated there will be a fall of about four (4) feet from the bag to the patient's ear, though the height of fall should be so adjusted as to never cause discomfort. If at all painful lower the bag.

"Use the smallest size of hard-rubber tip, which should be slightly introduced just within the opening of the ear, but *must never be pressed in against the ear so hard as to cause pain or prevent the free escape of the injection* into a bowl which should be held below the patient's ear.

"Use the entire pint in this way in one ear and, when required, use a similar quantity in the same way in the opposite ear. Repeat the injection 8 to 12 times daily as directed."

During the interval between office treatments in mild cases, and always in the more severe cases, it is best for the patient to be put to bed. Internal medication as indicated is to be administered, particularly the so-called vegetable arterial sedatives, as aconite and gelsemium, which I find much better adapted to allay the febrile tendency than are the more modern coal tar antipyretics, though for the simple allaying of pain, antipyrin is valuable. The intestinal tract must be kept free and the diet regulated. Leeches in the past have been much used, though I believe the hot phenol douches are to be preferred. The application of cold, with the ice bag, I regard as of value only in the early stage of mastoid involvement. Cotton moistened with a 10 per cent. solution of phenol in glycerin should, in the early stage, be loosely packed in the external canal and against the drumhead, from which benefit is derived through the process of osmosis (11). Another agent which I sometimes apply in a similar manner upon cotton, which is both cooling and anodyne, is Baume Analgesique. Even in cases wherein the air douche has been successfully employed. I advise the use of heat and the following of the other suggestions for treatment enumerated.

The desirability of cleansing and keeping clean so far as possible, both the nasal passages and post-nasal space, is advised by all writers. For cleansing the tubal orifice, what could be more efficient than the air douche derived from the continuous air current used as described, being far more effective than can be the use of sprays, etc. Another method I employ for softening and removing tenaceous secretions in this locality is by the use of a long and delicate cotton applicator, bent like an Eustachian catheter, the end of which is liberally wrapped with cotton and moistened with some glycerin preparation. Personally I use Mxt. D. P., which contains about 75 per cent. of glycerin, with 6 per cent. each of soda and borax (12). Proper blowing of the nose is another means whereby the advantage of air cleansing can be obtained, when nasal obstruction is not too pronounced, and musst be done very gently, and at first only with both nostrils open, with the head bent well forward over a washbowl or sink while the patient is standing. After this, the handkerchief can be used gently in the usual manner.

Lastly, if there is not a prompt subsidence of pain and the other manifestations, paracentisis must be done, and the call for this step hinges largely upon the stage of the disease and upon the character and location of the intra-tympanic contents. In the more mild forms of infection, the retained secretion is a serous transudation in the atrium, while in the more virulent infections, which are considered suppurative, the tympanic vault becomes involved, and in fact, as soon as this location is known to be the field occupied a free paracentisis should be done without delay.

I must add that after the drumhead opening, whether by spontaneous rupture or by incision, I have failed to appreciate any disadvantage from the use of the hot carbolized douche, when used with the precautions specified on the printed sheet of directions, and when douches can be employed with sufficient frequency. I greatly prefer this method instead of the use of the so-called "dry treatment," until the discharge has practically ceased, when the latter method is admirable until the drumhead has healed.

Following a paracentisis, gentle suction with a Siegle pneumatic speculum employed once daily in the external meatus, in connection with other indicated treatment, including inflation, will facilitate rapid recovery, the patient meantime practicing auto-inflation by the Valsalvian method several times daily, and, after the first week, the use, for a few days, of pneumatic massage with a mechanical aural masseur (13) will not only further facilitate the cure, but will also help to diminish or prevent the tendency toward impaired ossicular mobility, which so often follows acute inflammation of the middle ear.

Columbus Memorial Building.

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PREVENTION OF TUBERCULOSIS.*

BY J. W. CLEMMER, M. D.,

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The destruction of discharges from open tuberculosis is the basic principle underlying prophylactic measures. The destruction of sputum is the nucleus of practical phophylaxis, around which gather preventative activities.

The trail of infection left by the tubercular subject under the varying conditions of social and business operations, renders the application of this simple rule most complex and difficult to secure.

Private prophylaxis has reference, (1) to the preventive measures practiced by the sick, (2) the preventative measures practiced by the well.

The patient should remember the means of auto-infection; (1) Absorption of bacilli along the respiratory passages; (2) Inhalation of bacilli, laden dust from his own neglected sputa; (3) By absorption along the alimentary canal after ingestion. The patient should expectorate thoroughly, and cleanse frequently the upper air passages and bucal cavity with proper antiseptic solutions, especially before eating.

The faces of male patients should be free from beard or mustaches.

Indoor patients should expectorate in vessels containing a germicidal fluid. The lips should then be wiped with a paper napkin, to be deposited in a paper bag and burned.

If one-half be true that is claimed for spray ejections, the patient should be cautious in talking, coughing or sneezing, so as not to endanger others in close proximity, and to remember that the ejected spray is the carrier of microörganisms.

Out of doors the patient should spit into a paper napkin, and deposit it in a water-proof bag to be burned at the earliest oppor-

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tunity. All sorts of cotton or linen fabrics are objectionable as bearers of infection.

Patients should be taught that by following these instructions they not only protect themselves, but others as well.

The social custom of kissing should not be indulged by the tubercular subject.

Table utensils should be kept apart (if for no other purpose than that of discipline). The drinking cup carries infection.

Sources of infection, in the presence of the infected subject, multiply as we follow him through the varying circumstances of life. The often repeated example of the tubercular nurse, infecting ten consecutive infants who died of meningitis, due to her habit of blowing into the mouths of the newly born, only serves to point the danger of infection through the ignorance or carelessness of tubercular matrons, nurses, teachers and the ever present meddlesome Mattie, with kisses and an exhuberance of sentiment and death.

The babies are unable likewise to protect themselves from dirty finger nails, hands, toys, etc., all bearers of infection.

The habit of placing everything available in the mouth and abrasions of the skin, are portals of entrance, and should be carefully guarded against by soap and water, sunlight and pure air.

Another very important prophylactic measure in children is to remove foci of bacteria, such as hypertrophied tonsils, adenoids and catarrhal conditions.

The care in prevention to be taken by the well, is a repetition of the measures to be adopted by the sick.

In the latter stages of the disease, however, these measures when most needed, cannot be carried out by the patient.

Sputa lodging upon clothing or bedding,should be taken up carefully by the attendant, with a cloth saturated in a disinfectant solution and burnt.

There is danger in living in houses recently occupied by infected subjects, or in handling or wearing infected garments, or other fomites. Hence the necessity of fumigation.

The well should not only protect themselves against the dangers of inhaling, but also of ingesting infected matter. The many little domestic relations between the sick and well, as for example, when a door knob serves as the medium of poisonous transmission, are all open to the same danger.

Cleanliness is the password to safety.

The well are likewise exposed outside of home relations. Any of the commodities of trade, in relation to this subject, manufactured or handled by tuberculous people, under favorable conditions, may convey the bacilli. This is particularly true of meat, milk and other edibles. Hence the necessity of domestic care in the preparation of foods and, above this, the necessity of special sanitary legislation.

To guard against consumption, one must not only fight invasions from without, but provide healthful resources within, by hygienic living, eating and drinking, in order to prevent the susceptibility necessary to the induction of the disease. Hence the duty of the medical practitioner to cure consumption before a diagnosis is possible, by elevating the standard of immunity.

Private prophylaxis can do much under the directorship of medical men, but the work is so vast, and the obstacles so formidable, when it comes to public prophylaxis, that there is no longer any question as to the necessity of governmental aid, in the solution of this, the greatest problem of the age.

There is little or no legislation looking toward the abatement of tuberculosis. The nearest approach is the maintenance of a few hospitals by the United States government, for its tubercular employes.

Ohio has joined four or five other states in the support of sanatoria.

A more comprehensive view has been taken by a few states in providing funds for the prevention of bovine tuberculosis.

Isolation, cleanliness and the tuberculin test are able to stamp out the disease in dairy herds. The cow's safety is not hedged about by social, selfish, or industrial barriers. The same means applied to tuberculosis in man will accomplish the same result.

The final and successful issue of a campaign against tuberculosis must mediate through the federal government, unifying the work in a system of preventative measures, engrafted by state legislation upon boards of health. Such a movement implies an appropriation of large sums of money. Known means of prevention could thus be made applicable to all parts of the country, and to all conditions of tubercular subjects, whether in man or the domestic animals.

Suppose tuberculosis were to visit this country today, for the first time, as a pandemic disease, with its infection, mortality and prevention well understood. What would result? Simply this:

The whole nation would present willing hands to do the bidding of science. Sanitary and preventive suggestions would be followed by special legislation, provision of funds and executive organization.

The supposition, however, exists in fact yet, the nation continues to follow a donothing policy.

Because the disease has come to us as a heritage of the past, being warp and woof of the social fabric, we yield sanitary policy and common sense to the irrational dread of innovation.

Leprosy, much like tuberculosis, as to mode of infection and means of prevention, by isolation alone, is held in abeyance at the confines of civilization.

A decimation of the population by smallpox, yellow fever, or cholera, could not exist long; the organized effort of sanitary science and society would stamp out the disease by means known to public hygiene.

Why is it then that tuberculosis does not elicit a like activity at suppression? The chronicity of the disease does not render it any less infectious. Its relation to social, commercial or sentimental considerations does not render it any less destructive. The fact that it is not contagious does not reduce the violence of its infection.

There is no question as to the duty of the government in giving aid to this work. One of the functions of government is to safe-guard the physical welfare of its subjects.

Science has demonstrated the virtue of prophylaxis, and thus makes plain the duty of government. This movement involves an outlay of vast sums of money, but our state and country at great cost never hesitate to fight battles of commerce, national honor or sentiment. When the government rightly comprehends the importance of the subject, it will afford relief.

It remains for the medical profession and humane societies, of whatever name, to teach the people to ask of their representatives in legislative bodies, to make special provisions.

The anti-tubercular movement set to music in the tune of pensions for old soldiers, would arouse political enthusiasm sufficient to make the required provision.

A high order of prevention must include many and varied provisions. There is need of sanatoria hospitals and dispensaries; each serving a special purpose. There is need of more stringent building laws, as exist in New York. There is need of regulating the movements of the tubercular population, in migration and emigration. There is need of debarment of tubercular employes from public services, public schools and from occupations in which they can contaminate food, clothing, cigars, or implements.

There is need of fuuds to pension tubercular subjects deprived of occupations, and of their dependents.

There is need of registration of all cases of the disease in man and the domestic animals.

Other requirements would include the disinfection of houses, the spitting nuisance, and the smoke nuisance.

In Germany, the death rate from tuberculosis has been reduced one-third. The iaw requires all laborers and employes, earning less than eight hundred marks (800) yearly, to insure with state companies, providing against accident, old age and sickness.

These companies learned by experience the economic value of early diagnosis required of their physicians, and the treatment of all cases of tuberculosis in sanitoria.

In less than four months, it is claimed, under proper hygienic and dietetic conditions, many patients are discharged as cured.

The work of prevention systematically applied, in actual experience, not only shows its value in checking disease, but proves the application one of political economy.

Such a system of dual benefit could be worked out in this country, under state and county supervision.

There is need of taking this work out of the hands of theory and placing it under conditions of material development, in order to invite philanthrophy to bestow a rightful share of her gifts for the thousands of tubercular poor.

The philanthropists of this country give one hundred million dollars ($100,000,000) yearly, for benevolent purposes.

What preater charity, what greater benevolence or Christian work could be accomplished, than to feed, clothe and encourage by sanatorium or hospital treatment, the tubercular poor, and save from misery and poverty and death itself many thousands of fellow beings.

Colleges, churches, and all sorts of benevolent institutions spring into material existence in every city and village.

A shift of sentiment directed toward the crying need of tuberculosis prevention will call forth philanthropists to aid in the work.

Many thousands of beneficiaries bless the philanthropist with the library habit.

When the proper conditions are supplied other Carnegies will arise with the hospital habit.

Another feature of public prophylaxis now partially worked out by sanitary organization under state and local boards of health, is susceptable ot great good.

Since this is the only aid at present from legislative authority, its advantages should be invoked by a coöperation of sanitary workers. This accomplished, the profession can present a solid front, and consistently ask the state and the nation for material aid.

In public prophylaxis there is absolute necessity for sanitary administration, from state and municipal authority.

Since boards of health are the only legally organized representatives, these should be respected or reorganized to secure better administration of the public health.

There is need of such organization for the location and registration of tubercular cases, and for the disinfection of houses, bedding, clothing, etc.

In no other way can the hot beds of infection among the poor classes be abated, as proved in New York. In no other way can the tubercular poor be given hygienic instructions, many having no physicians. In this way material relief can be afforded.

These things pertain to public health, and few physicians in private practice are able or willing to work for the public without remuneration. The report of cases for registration is opposed because, it is said, the attending physician can carry out the provisions of both private and public prophylaxis.

Pitted against this claim is the fact that many physicians do not plainly and honestly inform their tubercular patients as to the nature of their infection.

It is a matter of sentiment to claim that to report cases increases the affliction of the patient.

The fact that the patient is taught by the health officer how not to reinfect himself, and how not to infect others, can work no hardship. To the contrary, the patient soon recognizes that to keep a tubercular subject in ignorance of the disease is akin to crime, because he is not given a fair opportunity to fight for health, and in protecting his friends from danger.

Sanitary authority should follow the trail of infection wherever it may lead, with spit cups, germicides and rules of conduct, until there is provided enforced isolation for those who will not, or cannot conform to hygienic conditions.

REPORT OF THE HARVARD CANCER COMMITTEE.—The Cancer Commission appointed by Harvard University has submitted a report of its labors during the past four years. "Its conclusions are said to be that cancer is neither hereditary nor contagious, and that it is not of parasitic origin, and that excision is the only cure except in the case of certain superficial growths which may be cured by radiotherapy."

The University of Halle, Germany, has conferred upon Dr. Willy Merck, member of the old house of E. Merck, Darmstadt, established in 1668, a very high distinction, namely, the honorary degree of Doctor of Medicine "in recognition of numerous meritorious contributions looking to the advancement of the therapeutic side of medicine."

TUBERCULOSIS—CAUSATION*.

BY CARL L. SPOHR.

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In tuberculosis we have one of the most common and one of the most dreadful diseases. Among its victims we find young and old, rich and poor, educated and illiterate, persons of all races, and even the lower animals succmb to its ravishes.

Historical. Tuberculosis as a disease has been recognized for many centuries and medical literature shows unmistakable signs of its existence, and in its most common form, the pulmonary, it has decimated the human race for thousands of years, and well earned the title, "white plague."

It is difficult to ascertain whether or not during this time the disease has increased in freqquency or violence, but we do know that during the past century its mortality has been frightful. It gathers between sixty and seventy-five per cent. of its victims from bread-winners, and so the disease also is of great importance from an economic point of view.

Consumption was known in ancient times, and a classical description of its symptoms is given by Hippocrates, 400 B. C., and it is mentioned by Celsus, 30 B. C., Galen, 200 A. D., and others.

No notable advances were made, however, until the seventeenth century, when the study of pathology was in the ascendancy. Tubercles were described by Sylvius (1614-1672); miliary tubercles, by Magnatus (1700); Bayle (1774-1816), showed that phthisis was not a disease peculiar to the lungs, and attempted a classification. Laennec (1781-1826), added to the pathology. Microscopic studies added rapidly to the knowledge, and amongst others in this field were Geuge, Henle, Virchaw and Niemeyer.

Buhl discovered (1857) that acute miliary tuberculosis was as a rule traceable to pre-existing faci, whose infectious products were disseminated by the blood; and thus he had a conception of tuberculosis as a specific disease.

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Even Morgani (1700) had expressed his conviction that tuberculosis was infectious. Laennec infected himself at an autopsy and from descriptions given, anatomical tubercules were observed by the earlier pathologists.

Kleucke (1843) was the first to induce experimental tuberculosis in a rabbit, but his discovery was soon forgotten. Villemin (1865) made successful inoculations in rabbits, raising a storm of discussion. His results were corroborated by Ponfick (1869), Chauveaux and Klebs (1873), Baumgarten (1880), and Cohnheim.

The question of the virus now became of greatest importance and it was reserved for the now immortal Robert Koch to bring the problem to a final solution and the question of the etiology of tuberculosis was finally and forever settled by the announcement of the discovery of the bac. tuberculosis, on March 22, 1882.

Koch's proofs of the specificity of tuberculosis were so ably and so classically presented that his treatise will always remain a model of perfect scientific research.

He demonstrated the bacilli in sections of pulmonary tubercles of recently killed animals and found bacilli regularly in miliarytubercles in tuberculous intestinal abscesses, in scrofulous cervical glands, in tuberculous joint affections, in lupus, in tuberculous sputum, in consumption of cattle, in fact, in all of the tuberculous diseases. Further, he showed the constancy of their presence in tuberculous conditions and their absence in other diseases and in healthy tissues, and finally applied the crucial test of cultivating the germs outside the body, and with these pure culturs, reproduced typical tuberculosis, using for his experiments many varieties of animals.

The scientific world, after little opposition, accepted his organism as the sole cause of tuberculosis.

General Characteristics. It is a non-motile, non-flagellate, non-liquifying, non-chromogenic, aerobic, acid resisting, purely paracitic, highly pathogenic myco-bacterium, occurring in slender, slightly curved rods with rounded ends, and not infrequently showing distinct branching forms. Length, 1.5 to 3.5; breadth, .2 to .5 u. Meta-chromatic granules at times give a beaded appearance.

Staining. Two unusual properties are here of great importance. (1) Great resistance to stains, requiring use of morants. (2) Great tenacity in retaining stains under the influence of strong acids.

These two properties make it possible to use (practically specific) methods of staining, of which there are two.

The Koch-Ehrlich method. Staining with anilin water—gentian violet (incubator, 24 hours), rinsing and subjecting to alternate influence of nitric acid—25 to 33 per cent., and alcohol, 60 per cent.—until decolorized (!) and counter-staining.

Ziehl-Nielson method. This method for clinical purposes has the advantage of being more rapidly applied, and gives good results.

Spread sputum, air-dry, fix, stain with Ziehl's solution of carbol-fuchsin, hot, 5-10 minutes, wash with water, decolorize with either HCl alcohol 3 per cent, acquous H_2SO_4, 25 per cent, or aqueous HNO_3, 33 per cent., until the red color is *just* removed; rinse and counterstain with a contrast color (methylene blue). This gives red bacilli in a blue field.

In addition to these two methods, there are many others, mostly modifications (as Gabbett's), and many of little significance.

In searching for bacilli in sputum which contains but small numbers, it is important to make a large number of specimens before reporting negative results, or the sputum can be rendered more fluid by addition of KOH and then sedimented by means of centrifuge.

To detect the organisms in tissue, either Ehrlich's or Unna's method may be employed.

Differentiation—From Leprosy. There are slight morphological differences, but by staining, more satisfactory results are obtainable, though not always diagnostic. B. leprae stains with aqueous cold solutions of anilin dyes, and specimens prepared in this way and decolorized with H_2SO_4 alcohol, 10 per cent., will give positive results with B. leprae, negative ones with B. tuberculosis.

From B. smegmatis. Mistakes of serious nature have occurred by mistaking this organism for B. tuberculosis, and a method of Bunge and Tantenroth can be employed.

Immerse thick smears in alcohol—absolute—about three hours, then in chromic acid, 5 per cent., for 15 minu., wash thoroughly, stain with carbol-fuchsin, decolorize with dilute H_2SO_4, three minutes, or HNO_3, pure, 1 to 2 mins., wash and counter-stain 5 mins. with concentrated alcoholic solution of methylene-blue. B. tuberculosis stains; B. smegmatis does not. If further evidence is needed, cultural and inoculation tests must be employed.

During the last few years, Moeller and others have described a number of acid-fast bacteria obtained from hay, butter and other sources, and these merit careful study.

Briefly speaking these so-called "psudo-tubercle bacilli" resemble the B. tuberculosis more or less in form and in their failure to decolorize with acids when stained. They differ markedly, however, in cultural properties and in pathogenic results.

Koch grew B. tuberculosis on blood-serum, and later it was observed that luxurious growth could be obtained on glycerin-agar. Since then, it has been grown on other culture media, including potato and even on non-albuminous media. Growth is always slow, and occurs only between 29°, 42°C, best at 37°C.

Concerning the life, period and resistance of B. tuberculosis, we may summarize as follows: In cultures of blood serum, they live about six months; on glycerin-agar, about six to eight weeks.

Dessication. Experiments by various workers give somewhat different results, but we may say that under ordinary circumstances, dried sputum loses its virulence in about three months, but occasionally may retain its virulence for six months.

Resistance to heat. Moist heat—kills 55°C—four hours; 60° C. one hour; 70° C. ten minutes; 80-90° C. five minutes; 95° C. one minute.

Resistance to Cold.—This extends over a long period, with retention of proliferative power.

Disinfectants.—In sputum, $HgCl_2$ gives poor results, owing to albuminous constituents. An equal quantity of 5% carbolic acid kills within 24 hours, while an equal quantity of 2½% does not, within this time.

The manifestations of tuberculosis are protean. No tissues or organs in the body are entirely exempt and it will be impossible at this time to discuss the mode of injection in each case, but a brief allusion to channels of infection is important.

Before considering invasion of the body we must briefly consider the occurrence of the B. tuberculosis outside of the body. The biology shows us that the bacillus cannot multiply outside the body and exists only as a parasite.

In a number of tuberculous diseases in which the organs affected communicate with the surface germs are almost constantly delivered to the exterior. This is the case in the respiratory tract; also in intestinal and urinary cases and those of suppurative nature. The sputum is of these by far most important, and the lingerer will expectorate bacilli laden sputum for months or years and may daily produce on an average 7,000 million bacilli.—(Cornet.) It has been shown that most of these bacilli are already dead, but many still remain virulent. Such sputum on drying disseminates bacilli into the air and at some time or other are probably inhaled by some of us. Infection through the respiratory tract is the most frequent and is caused by inhalation of the dried sputum. In rooms and dark nooks where the destructive influences of sunlight are absent this condition becomes a serious menace because the germs in such places are distributed over a small space. Inhalation tuberculosis has been experimentally demonstrated.

Some writers consider the atomized secretions projected during coughing by the consumptive also of great danger and these little balls may be projected several feet.

The breath of the consumptive does not ordinarily contain any bacilli, owing to their inability to free themselves from the moist membranes; sputum as long as moist is incapable of yielding bacilli to the air.

Bacilli may enter the tonsils and be carried to the cervical lymph glands, or glandular tuberculosis may result from entrance of the bacilli from the intestine.

Wounds are an occasional portal of infection and the bacilli enter usually with moist sputum or during autopsies. The unbroken skin offers a fairly reliable barrier to infection. Infection can also take place through the intestinal tract, either through the pernicious habit of swallowing sputum or from infected food, as milk or meat. It does not seem necessary that ulcers be present in the udders of tuberculous cows. Meat on account of being cooked is less frequently a source of danger.

The relation of human tuberculosis to bovine has caused considerable discussion during the last few years. Virchow, 1868, insisted that they were different. Theobald Smith, 1898, stated that we are justified in establishing a distinct human and bovine variety of tubercle bacilli. Koch, in 1882, stated that human and bovine tuberculosis were the same, but in 1901 took the opposite position and startled the world by stating that bovine bacilli were not capable of producing ordinary tuberculosis.

The weights of evidence and opinion are against Koch and we can now say that the bacilli of human and bovine tuberculosis are the same organism, but modified in their activity by a change of host; and further, we are not justified in relaxing in any measure our efforts to prevent the use of tuberculous meat or milk.

Infection through the genital tract occasionally occurs. Neither the bacilli nor the consumptive are ubiquitous, and germs are only found in those places which are inhabited by careless or ignorant consumptives.

Seminal transmission of bacilli lacks all foundation and placental transmission, while undoubtedly possible, is rather rare.

We will not here discuss hereditary predisposition.

As to acquired predisposition, we may state that some diseases leave the tissues in such a state that bacilli can more readily obtain foothold and, since irritation of mucous membranes and defects of the epithelium facilitate entrance of the bacilli, infection is particularly favored. Some diseases may break down a latent focus and thereby cause the dissemination of the bacilli.

THE CANTON MEDICAL SOCIETY.—The 37th regular meeting of this society was held March 3, 1905. The following program was carried out: Lecture, "Intermittent Claudication," by G. F. Zinninger, M. D. Cases were reported by Drs. W. H. Weaver, Harlan Dudley, W. S. Foulks, and C. A. Crane. E. J. March, M. D., President; C. F. Schultz, M. D., Recording Secretary.

MEMBRANOUS CROUP AND ITS THERAPEUTICS.*

BY G. H. MAYHUGH, M. D., WESTERVILLE, O.

Definition: An acute, non-infectious inflammation of the mucous membrane of the larynx, and often of the trachea, giving rise to fever, more or less intense, and characterized by the formation of a membranous exudation upon the tissues involved. Its duration covers a period of from two to ten days. The mortality attending it is quite high, ranging near seventy per cent. Death comes from asphyxia.

Pathology and Diagnosis: It is the aim of this paper to be practical rather than technical; hence, the minute pathology of the disease and those from which it is to be separated, will not be referred to, but references will be general, and have to do with matters objective, clinical and macroscopical only. Idiopathic membranous laryngitis is most likely to be confounded with acute cartarrhal laryngitis, laryngismus stridulus and laryngeal diphtheria. From laryngismus stridulus the differentiation is easy. In this there is no fever, the labored breathing comes on suddenly and is as quickly ended, and there is no voice change as in croup. As between acute catarrhal laryngitis and croup it is not so easy to decide, yet not specially difficult. Laryngitis is a disease of adult life, croup is incident to childhood. Laryngitis is more painful than croup, and respiration is more easily carried on in laryngitis, as a rule. A croupal cough has a lower note than that accompanying laryngitis, which is shorter and more broken. Degultition is very painful in laryngitis, not at all so in croup. The temperature range is a little higher in laryngitis than in croup, except very late in fatal cases of the latter. When we come to decide, in a given case, as between membranous croup and laryngeal diphtheria, the task is not always an easy one. Especially is this true when we see the case of diphtheritic croup in which the initial formation of the membrane is laryngeal. With no pharyngeal involvement beyond a slight congestion, perhaps, of the mucosa, no fetor of the breath, no history of exposure to diphtheritic infection, no glandular swelling, it is difficult to say that the case is not malignant, that it is only membranous croup. The costly and annoying error of health board quarantine finds in just this class of cases its only justification. It is probably wise to err on the side of safety. But the opinion is purposely given herein that membranous croup and laryngeal diphtheria are not identical. Our belief is hinted at in our definition of the disease under consideration. Ever since McKenzie's dictum went forth that membranous croup was only laryngeal diphtheria, that idea has obtained a gradually enlarging acceptance by the profession till it is wellnigh universal. The omnipresent Klebs-Löffler bacillus being present in the laryngeal secretions, the conclusion is drawn that the disease is diphtheritic in its nature. A reaction has set in, fortunately, and it has been demonstrated that we have a type of croup that, while it is exudative and membranous, is benign, as touching those exposed, and not diphtheritic. Holt (Infancy and Childhood, page 445), while he holds that "membranous inflammation beginning in the larynx is almost invariably true diphtheria," yet he admits that "we have a form more frequently due to another kind of infection than to the Klebs-Löffler bacillus," and he gives membranous croup a separate chapter in his excellent treatise. Northrup gives membranous croup separate consideration and says (Keating's Diseases of Children, Vol. II., page 521): "A pseudo-membranous laryngitis may arise from trauma; it may arise from the presence of pathogenic germs or germs of diphtheria; it is believed by many that a similar pseudo-membranous laryngitis may arise from a cause apart from either." Anders (Practice, page 179) holds that the croupal inflammation is diphtheric, usually; but admits that "there are forms of inflammation occurring most frequently in the pharynx and adjacent air passages that are attended by the formation of a pseudo-membrane and are not caused by the Klebs-Löffler bacillus." He calls it pseudo-diphtheritic croup. Bishop (Disease of Ear, Nose and Throat, 1897, page 428) sums up his discussion of the subject by saying: "There are two varieties of membranous croup, the one diphtheritic, the other non-diphtheritic"; and his judgment is certainly reliable. Ellis, in "Diseases of Children," says: "Similarity of cases here and there does not remove the great broad line which, looking to the totality of the symptoms, appears to me to run plainly enough between the two. In diphtheria the exudate is formed upon the tonsils and pharynx, and spreads thence upwards and downwards. Whereas, in croup, I recognize a disease sporadic and doubtfully, if at all, contagious, of a rather sthenic character at first, in which, not the tonsils and pharynx, but the larynx and trachea are the parts first attacked."

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* Read before the Columbus Academy of Medicine, September 19, 1904.

It is strange that the two forms of croupal laryngitis should ever have been confounded, when one considers the clinical aspects of a typical case of each disease. For the physical signs and symptomatic manifestations are so different, and the ground for differentiation so well made out. Let us note some of the main points of difference. Membranous croup arises idiopathically; diphtheria never originates *de novo*. Membranous croup is not infectious or contagious, diphtheria certainly is. The writer has had cases in families where other children were present and, though no pains were taken to keep up isolation of the patient, no other case occurred. Exposure to diphtheritic croup does not thus uniformly give immunity from its deadly contagium. Membranous croup is preceded by hoarseness and cough; diphtheria by sore throat. Prostration follows the laryngeal stenosis in membranous croup; diphtheria is ushered in by prostration. The exudation of membranous croup is pearly white, that of diphtheria a dark gray. Membranous croup is a disease of childhood; diphtheria frequently attacks adults. Membranous croup is never attended with the peculiar fetor of breath that always characterizes diphtheria. Diphtheria always shows involvement of maxillary glands. Membranous croup never penetrates to the structures beneath the mucous coat of the larynx; the diphtheritic membrane embraces the sub-mucosa. Certainly, where the time of observation has extended over a period of a few hours, the clinical features of these two forms of laryngeal disease fully justify a clear diagnosis in each case.

Treatment: Once a clear diagnosis is made out, in a given case, treatment is the most important part of the whole matter; but diagnosis must be accurate, for the remedies used for diphtheritic croup would not be suited to membranous croup, and *vice versa*.

First, see to it that the temperature of the room be kept up to at least 72° F., and keep the air moist with vapor of water, plain or medicated with unslacked lime. Second, keep the bowels well open. Third, give plenty of nutritious food in liquid and semi-liquid form.

For a child of from eighteen to twenty-four months of age prescribed as follows: ℞ Sanguinarine nit., gr. 1-4, iodized lime (Nichol's), gr. iv, ext. lobelia inf. fl. (Merrell's green drug), gtt. xx, emetin (Abbott's), gr. 1-4, glycerine C. P., ʒ j, ess. wintergreen and saccharine aa q. s., aqua dest. q. s. ad. ℥ j. M. et Sig:—Teaspoonful given every five to sixty minutes, as the urgency of the case requires. In ordinary cases, or, rather in cases seen very early, its use every half hour will be ample, the disease very soon coming under control, but if the disease has run for some hours, the medicine will need to be given as frequently as every five minutes till there is marked relief, as evidenced by a free mucous secretion and easy respiration. If the remedies in the above combination do not after three or four hours use give marked alleviation, increase the quantity of the sanguinarine, calcium iodized and lobelia, adding a little capsicum—as much as the patient can bear or will tolerate without too much aversion to the medicine—and follow its frequent administration with plenty of tepid water, so that the emesis ensuing shall be easy and thorough. Produce emesis every two to four hours, as the child's strength will permit, till the backbone of the attack is broken; then drop back to the original prescription and give it just often enough to keep the laryngeal secretions free. It matters not if the child sleeps, wake it and give the medicine. "Eternal vigilance is," in croup, as in civic matters, "the price of safety." In the writer's experience the time of the laryngeal spasm, the frightful and dangerous storm-period of membranous croup, is the time of the mid-day and early evening nap, and again from three to five in the morning. At those times the more positive medication and most frequent dosage will be needed. Under the teaching of the esteemed Prof. G. N. Davidson, M. D., the efficacy of sanguinaria as a remedy for croup (membranous) was deeply impressed upon me in my student days, and my early treatment of the cases was based upon it as the chief agent used, and success always came, but it was often tardy. For some seven years past the iodized lime, discovered by Nichols and prepared by Billings and Clapp of Boston, and by The Abbott Alkaloidal Co., has always been associated with the sanguinarine in these cases, and I think they yield more promptly. Many physicians depend solely upon the lime; and indeed Dr. Wm. H. Waugh claims to be able by the use of it to differentiate between diphtheritic and membranous croup. If it does not yield to iodized lime, he concludes the case is diphtheritic and falls back on calcium sulphide as the remedy. How this lime salt acts I do not pretend to say. Some writers say it is due to iodine set free, that it is so efficient; but iodine alone has no such effect. The ordinary calcium iodide is of no value whatever in croup; but calcium iodized (Nichols) is worthy of all confidence and deserves a very wide use by the profession, as does "calcidin" (Abbott). It is largely to help bring this agent to the attention of my professional brethren, as a specific for this very generally fatal malady, that this article is penned. Dr. V. E. Lawrence, Ottowa, Kan., has been one of the most earnest advocates of the use of this lime salt in this form of disease, and to him should be given the credit of effectively presenting it to the profession. The finest article on its use, and on the differential diagnosis of membranous and diphtheritic croup, appearing recently, is that by Dr. Lawrence in the September, 1900, issue of the *Alkaloidal Clinic*. The treatment above outlined will be greatly enhanced by the liberal use of comp. stillingia liniment (Merrell) on the throat, larynx and trachea; and in some cases I have added a modicum of it to the internal treatment. In extreme cases, the powdered sanguinaria in two, three or even five grain doses in simple syrup, till emesis is secured, is most valuable. Emesis thus secured has often expelled the membrane in its entirety. Many physicians rely wholly upon iodized lime in the treatment of this dread malady. They put ten to fifteen grains into four ounces of water and give from one to two teaspoonfuls every fifteen to thirty minutes till patient is better, then less frequently. The disease is so serious that I have never yet felt satisfied to depend upon the lime alone; but with it and sanguinaria I approach the treatment of every case with the utmost confidence of success. Have not had a single failure yet and I have treated a goodly number of cases.

September 16, 1904.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, February 20, 1905.

F. F. Lawrence, President. Chas. J. Shepard, Secretary

Members present, fiftytwo. Dr. J. H. J. Upham read a paper on "Some Recent Views on the Etiology of Diabetes," to be published in next issue. Discussion by Drs. Bleile, Hatton and Bradley. In his absence Dr. S. B. Taylor's paper on "Fecal Impaction" was read by Dr. Goodman. Discussion by Drs. Teachnor and Loving.

Drs. C. L. Jones, J. J. Coons, I. B. Harris and C. F. Gilliam were elected to membership in the Academy.

Dr. Upham reported that the committee appointed to correspond with the district societies in this district in regard to helping defray expenses of last district meeting had heard from one society only. He moved, and it was carried, that the Columbus Academy of Medicine pay $35 to proper persons to defray the Academy's part of expense of said meeting.

The Executive Committee suggested the following amendment to Constitution and By-Laws: 1—That the Executive Committee consist of the three last ex-presidents of the Academy and the president and secretary then in office. In case of vacancy the president shall appoint a member to fill unexpired term. 2—That the secretary of Academy be elected for three years.

Regular Meeting, February 6, 1905.

J. D. Dunham, in the Chair. Chas. J. Shepard, Secretary

Members present, forty. Pathological specimens were presented by Drs. Warner and Baldwin. Dr. Goodman reported a case of imperforate urethra.

Dr. Kinsman read a paper on "Albuminuria." Discussion by Drs. Rankin, Dunham, Means, Warner and Hatton. Dr.

Wardlow's paper on "Some Remarks on the Treatment of Puerperal Sepsis" was discussed by Drs. Means and Howell.

Drs. I. M. Lisle, Clifton Reedy and H. B. Blystone were elected to membership in the Academy.

The President appointed Committees on Accommodation, Entertainment, Exhibits and Finance to make arrangements for the next annual meeting of the state society to be held in this city in May. The membership of these committees was given in the February issue of this JOURNAL.

MEETING OF THE EIGHTH COUNCILOR DISTRICT OF THE OHO STATE MEDICAL ASSOCIATION.

In response to a notice sent out by Dr. Edmund C. Brush, Zanesville, Councilor for the Eighth District, a meeting of the physicians of the Eighth Councilor District, composed of the counties of Athens, Guernsey, Licking, Morgan, Muskingum, Noble, Perry and Washington, was held in the assembly room of the Masonic Temple, Zanesville, on January 25, 1905. The meeting was caled to order by Dr. Brush, and an organization was affected by the election of Dr. J. D. Axline, Shawnee, President; Dr. Chas. H. Higgins, Sonora, Secretary, and Dr. F. W. Lane of Cambridge, Treasurer.

The following papers were then read: "The Medical Treatment of Chronic Gastric and Duodenal Ulcers," Dr. John Dudley Dunham, Columbus; "The Surgical Treatment of Chronic Gastric and Duodenal Ulcers," Dr. W. D. Hamilton, Columbus. Dr. Hamilton presented two patients who had been relieved by operation, one for chronic gastric ulcer, and one for carcinoma of the pylorus, with exhibition of the neoplasm removed.

"The Perineum—Its Management During Parturition," Dr. E. F. Danford, Glouster; "Criminal Abortion from a Moral Standpoint," Dr. Charles P. King, Newark; "Fecal Impaction," Dr. Sterling B. Taylor, Columbus. Dr. Taylor exhibited a specimen of bowel showing immense distension of the sigmoid region due to fecal impaction. "Outside the Beaten Paths," Dr. J. D. Axline, Shawnee; "The Rationale of Suggestion," Brooks F. Beebe, Cincinnati; "Report of Several Eye Cases," Dr. L. R. Culbertson, Zanesville.

At the conclusion of the reading of the papers, the meeting adjourned to the dining room, where dinner was served, after which several toasts were responded to, Dr. W. A. Melick, Zanesville, acting as toastmaster.

The meeting was highly successful, both as to attendance and the quality of the papers read. A good part of the success of the meeting is due to Dr. Edmund C. Brush, who as Councilor made all the arrangements.

CHAS. H. HIGGINS, Secretary.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The thirty-second annual meeting of the American Public Health Association was held in Havana, Cuba, during the second week in January, 1905, under the presidency of Dr. Carlos J. Finlay. As reported in the Medical Record, at a meeting of the laboratory section on Monday, under the presidency of Dr. V. A. Moore, of Cornell University, discussions took place on the "Purification and Preservation of Water Supplies," and the "Disposal of Sewage and Industrial Wastes." Mr. G. W. Fuller, of New York, Chairman of the Committee on Standard Methods of Water Analysis, submitted an elaborate report on the changes and improvements in the methods used in bacteriological tests of water. The address of the Chairman, Dr. Moore, was delivered, and then the election of officers was held with the following result: Chairman, Dr. W. H. Park, New York; Vice-Chairman, H. W. Clark, Boston; Recorder, Dr. H. D. Pease, Albany, N. Y. The first general meeting of the Association was held on Tuesday evening, when Dr. Finlay delivered his presidential address, which was devoted chiefly to the history of the study of yellow fever in Havana. The banishment of yellow fever from the city was, he said, the direct outcome of the work of two American commissions, the first that conducted by Sternberg a quarter of a century ago, the second under the lamented Reed, twenty years later. The latter decisively established the true etiology of yellow fever. Two of its members were themselves prostrated by the disease, and one, Dr. Jesse Lazear, died a martyr to scientific zeal. Dr. Finlay praised the work of Major Gorgas, chief health officer under General Wood, who, adopting the commission's findings, succeeded within seven months in ridding Havana of this century-old endemic. With reference to the two cases of yellow fever last October in Santiago Province, Dr. Finlay said it was presumed that they were transmitted by mosquitos from a quarantined ship. These were the only fever cases since 1901.

At the conclusion of his address, Dr. Finlay received a warm ovation from the large audience present. Several speakers accorded him praise for the large share he had in this work, and full credit was accorded him for the great scientific acumen which had led him to the discovery of the part played by the mosquito in transmitting yellow fever, which discovery had been so positively confirmed by later investigations.

A paper was read by Dr. C. A. Snodgrass describing the system of chemical purification of the water supply now in use in St. Louis. A paper by Dr. A. H. Doty, Health Officer of the Port of New York, who was not present, was read. Its subject was the use of "Sulphate of Copper in the Destruction of Mosquito Larvae." At the afternoon session Dr. Erastus Wilson, of Havana, read a paper on "Sanitary Conditions in Havana and the Necessity for their Improvement." Professor L. C. Robinson, of Brunswick, Me., read the report of the Committee on Disinfectants. "The Disinfection of School Books" was treated in a paper by Dr. Walter Green, Health Officer at Buffalo, N. Y. Dr. C. V. Chapin, Health Officer of Providence, R. I., read a paper on "Sources of Infection."

The banquet took place at the Tacon Theater on Wednesday evening. In responding to a toast to the United States, Dr. William Bailey of Louisville, Ky., spoke of the work the American army surgeons had done in the sanitation of Cuba, and said this work was being continued by the efficient health officer of the island, Dr. Carlos J. Finlay.

The next meeting of the American Anti-Tuberculosis League will be held in Atlanta, Ga., April 17 to 19, 1905.

The opening session is intended to be a broad one, in an educational sense, and the heads of the largest educational institutions of the United States will be invited to be present.

Reduced rates will be had on all roads. Hotel rates will also be made special for visitors. Over 1000 delegates representing the following leading national and state medical societies have been enrolled.

The President, Dr. Geo. Brown, requests every member of the medical profession of the United States who is interested in the prevention of tuberculosis and who has the good of humanity at heart, to be with us and help us with this great work which we have started so auspiciously and for which there is such a great field for suffering humanity.

Periscope of Medical Progress.

MEDICINE AND SURGERY.

GASTRO-ENTEROSTOMY.

Dr. James G. Mumford (Boston Medical and Surgical Journal), says: "There are two operations usual in the case of gastric cancer,—partial gastrectomy and gastro-enterostomy. At first sight one would suppose gastrectomy to be far the more formidable, but operators have learned that in the long run, gastro-enterostomy for malignant disease results in a higher mortality than does gastrectomy.

Setting aside the consideration of, and in the case of "benign" disease, looking for a radical operation for stomach drainage, for an operation which shall return the parts to an anatomical condition essentially normal, one sees that some form of gastro-enterostomy must be done. Finney's operation is valuable, for it returns the parts to a condition approximating the normal, but Finney's operation is not always applicable. Rodman's partial gastrectomy, combined with all cases of gastro-enterostomy, returns the parts essentially to the normal, but Rodman's operation seems needlessly radical for routine practice. None of the other operations, as ordinarily performed, regularly restores the parts to anything like a normal condition.

The object of this communication is to urge an operation I have practiced of late, an operation elaborated out of the well-known procedure of Chaput. As originally done by Chaput, that operation consisted of: (1) Posterior gastro-enterostomy with the long loop; (2) entero-enterostomy; (3) section of the afferent loop between the two anastomoses. So far as it goes that operation is very satisfactory, but it does not restore the parts to their normal relations. Vicious circle sometimes ensues, the pylorus may resume its functions; the new gastric stoma may close. I add a fourth step,—invariable, routine, (4) section of the pylorus. That adds nothing to the risks; vicious circle is rendered impossible; the duodenum, now side-tracked, becomes a mere duct, a continuation of the common bile duct.

Doubtless this method of operating is not original, and it would be preposterous to describe it as a novelty; but since it offers a certain solution of the vicious circle problem, since it leaves the parts much as nature intended and since it is easy of accomplishment, I am urging it as a routine measure.

ANTITUBERCULOUSIS WORK IN THE UNITED STATES.

S. A. Knopf, New York City (Journal A. M. A., February 11), (Exchange), reports progress in the organization of the medical profession and the public against tuberculosis in the last few years, including a list of the special sanatoria for patients suffering from this disease in the United States and Canada. These appear under various names—hospital, sanatorium, sanitarium, home, etc. The proper designation, he holds, is sanatorium, derived from the Latin word *sanare*, "to heal," while sanitarium evidently comes from the Latin word *sanitas*, "health," and is usually employed to designate some specially healthful locality suitable for convalescent patients or an institution for the care of nervous and mental diseases. That this is coming to be the general understanding of the term is shown by the adoption of the word sanatorium by all the more recent establishments and some of the old ones. The term "Home" suggests an asylum, a place which the patient will enter and never leave, and from his observation he does not think that these institutions, as a rule, are as well equipped for curative purposes as are the regular sanatoria. One institution on his list is a seaside sanatorium for tuberculous children, an institution of special value for this class of cases. Multiple institutions for scrofulous children will be required in the fight against consumption. He speaks highly of special tuberculosis dispensaries, a number of which have been established in the large cities, and he thinks that special wards in general hospitals for this class of cases are next best, though not equal to special institutions. Isolation of consumptives in asylums and prisons is desirable, and Dr. Knopf commends the Agricultural Colony connected with the Texas prison as a worthy example. He holds also that such establishments would be of great advantage to indigent convalescents discharged from sanatoria, especially those who had formerly followed unhealthy occupations. He pleads for the co-operation of the various boards throughout the country in combating the ravages of tuberculosis.

EMPYEMA OF FRONTAL SINUS.

W. Freudenthal, New York City (Journal A. M. A., February 11), (Exchange), describes the diagonsis treatment, etc., of chronic frontal sinusitis. He points out that most cases will improve under intranasal treatment and this should be exhausted before resorting to more radical measures. The diagnosis is not always easy. The symptoms may be absent or deceptive; even the best and safest way, that of probing and washing for pus, has its difficulties, and one is likely to get into the frontoethmoidal cells or fail to find the canal altogether. The anomalies of the frontal sinus are also to be considered. His conclusions are substantially: 1. Regarding the conservative treatment of these cases, we should endeavor to be as conservative as possible. He refers with approval to the views of Kuttner of Berlin on this point. 2. In operative cases Killian's method seems to give the best results at present. 3. The first opening into the frontal sinus must always be below the outlined bridge and only after exploring the sinus should another above it be made. 4. In the latter case we leave a bony bridge which aids toward improving the cosmetic effect. 5. Closing the external wound immediately after the operation is by far preferable for such cosmetic effect. He reports cases illustrating the operation and its results.

BLANK CARTRIDGE TETANUS.

D. H. Dolley, Cleveland, Ohio, (Journal of the A. M. A., February 11), (Exchange), has investigated blank cartridges from several makers with special reference to their bacteriologic contents, employing cultural and incubation, as well as microscopic methods. The findings were rather negative as regards the tetanus bacillus, but the *Bacillus aerogenes capsulatus* (Welch) was present in a large proportion of the cartridges examined. Notwithstanding this fact tetanic symptoms developed in a number of the animals inoculated, and in still other animals inoculated from cultures from these. His conclusions are: 1. *B. aerogenes capsulatus* (Welch) is present in a large proportion of the wads of the three makes of the cartridges examined. 2. The wads of the Peters Company, inoculated in rats, guinea-pigs and rabbits, produced characteristic symptoms of tetanus. 3. The powder of the three varieties of cartridges examined were negative for *B. tetani* and *B. aerogenes capsulatus*. 4. My efforts at isolation of *B. tetani* from the wads have so far been unsuccessful. 5. There is abundant evidence, from clinical observations and animal experiments, that the wads of certain blank cartridges contain *B. tetani*. He says that Dr. Welch told him that he considered it diagnostic to see an animal in convulsions.

MEETING EMERGENCIES.*

BY W. C. GATES, M. D.,

Surgeon to Marysville Hospital, Marysville, Ohio.

From the cradle to the grave there are emergencies to be met by each individual and to the one who meets these emergencies with the greatest degree of promptness and efficiency will come the greatest degree of success. This is especially true of the practitioner of medicine. Every emergency is an opportunity for the medical man to show his skill and ability, and if he has profited by the experience of others, acts promptly without blundering, success comes rapidly; while the man who is taught only by his own experience is sadly handicapped in the race. To the younger men in the profession who may profit by the experience of others I can relate some of the emergencies which I have seen met, some correctly, others after much blundering, and a few with wholly inexcusable neglect.

While with a hunting party one of my friends received a charge of fine shot at close range through the calf of his leg. We were seventeen miles from any settlement and all the surgical supplies available were a small piece of iodoform gauze, a few bandages and a small pocket case. Satisfying myself that there were no arteries spurting, I made no attempt to clean the wound of shot or debris, but after washing my hands carefully and passing the small forceps through the flame of a match, I drew the gauze into the wound, packing it very loosely, and put on a fairly snug bandage. It was three days before it was dressed again. There was no infection and recovery was uneventful.

Many miles out in the woods one morning a boy received a charge of buckshot through his hand. There was some bleeding and a woodsman knotted a cord tightly around the wrist. He reached town that evening when a physician removed the cord and applied an Esmarch bandage tightly from wrist to elbow, and telephoned me to come and help him with the case the next morning. I was on hand and assisted at an amputation just above the wrist. A few days later the boy went to a hospital with gangrene of the forearm and suffered an amputation at the elbow.

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*Read before the Tenth District Medical Association, November 15, 1904, at Columbus, Ohio.

A brakeman fell from the top of a train, the wheels going over one arm and foot. We were fourteen miles from any settlement and over a hundred from a hospital; there was a northwest blizzard on with the temperature thirty below zero. The foot was only crushed, while the humerus was broken in the upper third, the biceps torn out of the shoulder insertion, and the triceps out of the elbow, while the other tissues were crushed off and torn apart. There was no arterial hemorrhage and I simply covered the stump with a small piece of gauze I had with me. To help overcome the severe shock, beer and whisky bottles were filled with hot water from the engine and packed around him with such blankets and clothes as could be found in the caboose. No liquor was given, but plenty of hot tea from the dinner pails. Cutting out the train at the first siding we ran for the hospital, where I turned him over to the chief surgeon.

The foot was cared for and saved, making a very useful member. The arm stump was trimmed up and covered until it appeared a beautiful triumph of the surgeon's art, but, alas, the man suffered excruciating pain for three weeks, when it was found that there was a dislocation of the shoulder joint and the pain stopped as soon as this was reduced. The accident occurred about 11 o'clock at night and we had to buck snow all the way to the hospital; when we hit the heavy drifts the patient and the men who were trying to hold him were frequently thrown across the caboose. While I do not feel guilty of personal neglect I am assailed by the keenest regrets whenever I think of that unrecognized dislocation.

About one in the morning when the thermometer was at zero, a drunken man started home, the family being away. He found himself without a key and the building locked. After trying different methods of gaining entrance he broke the kitchen window in an unsuccessful effort to reach the button on the door. A sliver of glass cut the radial artery and he was too drunk to give it proper care or think of looking for aid. He spent the rest of the night tramping around trying to gain entrance to the house or barn, and was found lying in the snow exhausted about 5 o'clock in the morning by a neighbor. A homeopath was called and as there was no hemorrhage then, although the snow for many rods was soaked with blood, he said it was a slight scratch, applied a salve and two turns of bandage, leaving the man chilled through and exsanguinated in a cold house, saying he would be all right when he got sober. He died in less than two hours. I believe this inexcusable, as he was a very hearty, robust man. Filling the arteries with physiological salt solution and proper care would have saved his life.

Many years ago I was called in counsel to see a woman with a temperature of 108° F. A few days after an abortion a foul smelling discharge issued and she went to bed sick with chills and fever. My friend cleaned the uterus with a dull wire and then used a very hot salt douche. She had been seriously ill until this douche was given, but she rapidly became worse until the pulse was almost imperceptible and the temperature 108°. After canvassing every possibility in the case we agreed that the symptoms had been caused by the extreme heat of the douche forcing all the poison contained in the uterine vessels suddenly into the circulation. Speaking of the douche my friend said that he did not measure the temperature, but it was "damned hot," All I could think of in the case was a sharp purge and all the hot drinks we could get into the woman. She recovered.

I could quote cases illustrating blunders of omission or commission indefinitely, but it is a needless waste of time. That one often learns more from a mistake made than from a success, is my only reason of speaking of a few of the mistakes which I have experienced.

THE MANAGEMENT OF ABORTION.*

BY J. H. RAY, M. D., COALTON, O.

This subject does not include the diagnosis or the prevention of abortion, but presupposes abortion to be in process. How manage it? Something, however, must be said of the causes of abortion, for upon the etiology depends to some extent the best methods to be pursued in tiding your patient through this dangerous ordeal. The principal causes of abortion are, 1st, Disease, local or constitutional, or both; 2d, The internal administration of drugs, either innocently or with criminal intent; 3d, External violence, and 4th, and most frequent and disastrous, the criminal instrumental interference. A few of the most frequent complications of abortion will be referred to, illustrated by a brief report of cases from the writer's experience.

In undertaking the management of an abortion it is proper and right, as in all other diseases and conditions that the physician should insist on a correct history of the case. This history, in a very large percentage of these cases will reveal the cause of the condition and the physician may proceed much more intelligently than it is possible when the etiology is obscure. The patient should be so informed. If the cause of the abortion should be ascertained to be disease, either constitutional or local, the administration of drugs or external violence, nature may be trusted, in the absence of alarming symptoms, at least for some time, to complete the process already begun. On the contrary, if the cause be criminal instrumental interference, no time should be lost, but the uterus should be emptied and disinfected as quickly as consistent with safety, for in a very large majority of these cases sepsis has been introduced into the uterus with the instrument. A wonderfully small percentage of our criminal specialists know the value of and practice strict asepsis in their criminal work. For this reason, when any instrument has been introduced into the uterus for the purpose of producing an abortion, and has succeeded in setting up the process, the uterus should be emptied and cleansed with as much facility as the conditions will safely permit. The best means of accomplishing this end will vary with different conditions and at different periods of gestation, sometimes requiring but a few minutes time and no instruments except the finger, and at other times taxing the best skill of the physician.

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* Read before the Meeting of the Ninth District Medical Society, Portsmouth, Ohio, November 3, 1904.

When the case has proceeded to three and one-half months of gestation or further, the uterus can be, usually, emptied within a reasonable time by the use of the hands alone, occasionally it may be necessary to introduce the whole hand into the vagina, but usually two fingers are sufficient. Where the period of gestation has been less than three and one-half months it is often difficult or even impossible to introduce the finger into the uterus, and other means must be employed. Many drugs have been administered by the stomach to facilitate abortion in early periods, quinine probably being the best, and they sometimes succeed. We think, however, that in urgent cases it is not desirable to depend upon them, they being too slow and uncertain. The tampon has been much lauded and doubtless has succeeded in many cases, but it is also too slow and uncertain in septic cases; and the practice of introducing a tampon and leaving your patient for your convenience is dangerous, as your speaker once learned by experience. The case referred to had proceeded about three months, criminal instrumentation the cause. The finger could not be introduced into the uterus, contractions were regular and moderately vigorous, accompanied by considerable hemorrhage. A gauze tampon was packed neatly into a small vagina and hemorrhage appeared to cease. I went to a neighboring town to see another patient and returned in about two hours, to find my patient pale and feeble from hemorrhage, which still continued at a dangerous rate. The tampon was found lying loose in a large, relaxed vagina. It was removed and better methods adopted and my patient made a good recovery. Had I returned one hour later the result might have been quite different. I have since managed my cases of abortion without the use of the tampon.

In all these urgent cases in which the finger will not pass through the cervix the uterus should be emptied by means of aseptic instruments, the patient should be transferred from the bed to a table, the limbs being supported by assistants, a speculum introduced and the womb brought into good view by tenaculum forceps fixed to the anterior lip of the cervix. A steel dilator should then be used with good judgment. After sufficient dilatation a pair of long dressing forceps should be introduced, closed, well up to the fundus uteri, then opened as widely as possible to use but little force, then closed and withdrawn about two inches, then opened and passed again, opening wider as they pass upward until they meet with resistance, then closed and drawn down again, repeating this process several times, then withdrawing the forceps, together with the mass of tissue included. The uterus may then be wiped out with sterile gauze, if there has been no signs of sepsis. But if absorption has taken place the uterus should be washed out with peroxide of hydrogen and then wiped with gauze. After this procedure if there should be any hemorrhage, it will usually indicate that the work has not been thoroughly done, and the forceps should be again introduced in search of further debris. We believe the dressing forceps to be much safer and thorough work more easily done with them than with the curette and only mention the latter instrument in these cases to condemn its use. The dressing forceps properly used in these cases will not injure the endometrium and removes only what has become foreign material. The curette is not so innocent, even in the most careful hands.

Among the complications of abortion, hemorrhage is most frequent and the method above described is the quickest and surest to control it. Next in frequency probably is sepsis. If fever persists after cleansing the uterus in many cases a few full doses of quinine with absolute rest will suffice to allay it. After the uterine cavity has been once thoroughly cleansed it is of little use to continue irrigations of the endometrium. More will be gained by absolute rest and the administration of internal antiseptics. Another frequent complication is abscess.• These cases should be treated surgically. A tenaculum forceps being fastened on the posterior lip of the cervix, the uterus is drawn forward and a transverse incision of the vaginal mucosa across the posterior wall of the cervix made. The operation is then completed with the finger. The abscess is easily reached and evacuated and then treated as you would any other abscess, leaving the incision widely open. This operation is simple and easy and without danger and it is rather strange at this day that so few physicians are willing to undertake it, and many patients are allowed to suffer for weeks or months until the pus finds its own means of escape or the patient dies. Local or general peritonitis often result from these abscesses. If the trouble remains local drainage of the abscess usually effects a cure. If the inflammation becomes general many cases will die, but when used in the onset of this trouble free saline cartharsis will save many lives.

Metastatic abscesses sometimes occur in near and remote parts of the body. Some years since the writer had a case of prolonged abortion in which the foetus and placenta were removed piece-meal and soon after my patient was seized with a severe chill and pain in the right hypochondriac region, followed by high temperature and acute abscess of the liver. The abscess ruptured into the pleural cavity, filling it completely and so compressing the lung that little or no air could be heard entering it. The pus was rapidly absorbed and my patient made a tedious but good recovery.

Another case to which I was called in consultation with Dr. Spencer of Wellston, patient was comatose and completely paralyzed on right side and died in about forty-eight hours of abscess of the left side of the brain.

About two years ago I was called to Oak Hill by Drs. Jones and Warren to see another case. This abscess was in the abdomen and of immense size. On opening the abdomen in the median line we discovered that the abscess was retroperitoneal. About one gallon of pus was evacuated, the edges of the wound into the abscess being stitched to the anterior parietal peritoneum and the abscess cavity packed with gauze. Under Dr. Jones' care the patient made good recovery.

Another complication of criminal abortion is more common than is usually supposed, for the reason that in many cases the condition is not discovered. It is deep lacerations and rupture of the uterus. A few years since I was called by Dr. Jones of Glen Roy to see a case of alarming hemorrhage of the uterus. The organ was found torn through almost to the Fallopian tube on the left side. The uterine artery was torn across, which was causing the hemorrhage. Packing the wound with gauze was tried for a few days, which controlled the flow of blood only while the tampon was in place. Then signs of sepsis supervened and abdominal hysterectomy was done and our patient recovered.

Another case in the writer's own practice in which he was called on account of the same alarming symptom, found patient in extremis from loss of blood, which was still flowing freely. This patient had a rather acute anteflexion and the posterior wall of the uterus had been perforated. Patient packing of the wound morning and evening with strips of gauze succeeded in curing this patient.

About the first of May of the present year a criminal abortion was performed on a woman who resides between Coalton and Wellston. The case progressed poorly under the criminal's care and another regular physician took his place and treated the case medically until in September. Local peritonitis and sepsis had reduced the patient to extremis and I was called when it appeared that the end was nearing. The patient was anesthetized by Dr. McClung and placed on the table. The uterus was cleansed, Drs. Dando and Jones assisting. It was noticed in cleansing the womb that the anterior wall offered no resistance to instruments. Transverse anterior vaginal section was done and the uterus separated from the bladder and the fundus turned out forward with tenaculum forveps. Ovaries and tubes were examined and found to be in normal condition, but a linear tear in the anterior wall of the womb, extending from the fundus down to the cervix, was discovered, gaping widely. This rent was stitched up with chromacized catgut, the uterus returned and the vaginal wound stitched with the same material. The fever and septic conditions promptly subsided and the local peritonitis gradually disappeared. The patient began to take nourishment well and for a time she promised to make a brilliant recovery. Since, however, as a result of a minimum of vital resistance and probably some lack of care in feeding, ulcer of the stomach has supervened and our patient's life is still hanging in the balance.

The management of abortion, when the cause is accidental or from local or constitutional disease is one of the problems that tests the skill of the physician probably more than any other condition with which he usually comes in contact, but when brought on by conscienceless, unskillful criminal instrumentation, it is far more dangerous to the life of the patient, and the complications that may arise taxes the skill of both physician and surgeon.

THE COLUMBUS MEDICAL JOURNAL.

A MONTHLY MAGAZINE OF MEDICINE AND SURGERY.

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MARCH, 1905.

Editorial.

A MEDICAL LIBRARY FOR COLUMBUS.

There seems to be good prospects of Columbus having the advantages of a local medical library as part of the Carnegie public library, the building for which is now nearing completion at the head of State street. Recently the trustees of the library sent a communication to the Columbus Academy of Medicine, indicating a willingness on the part of the trustees to set apart a portion of that building for library and reading room purposes, and also to furnish a room or hall for the meetings of the Academy. The subject is to be taken up with the library trustees by the executive committee of the Academy with a view of thus securing a meeting place for the Academy, and room for the medical library.

Such an arrangement will be a decided gain to the medical profession, and in view of the use which would be made of such a library it would seem to be a wise provision for the public good. There are certainly no good reasons why public funds should not be used in the purchase and maintenance of a medical library, for books of this character would probably be consulted as often and to as good purpose for the public welfare as those relating to other technical and professional subjects, such as engineering, archaeology, theology and law.

MORTALITY AMONG PHYSICIANS.

An interesting analysis of deaths among physicians for the year 1904 has been made by the *Journal of the American Medical Association*. The list of deaths, as published in that journal, is the basis of information. During the year there had been thus recorded the deaths of 2142 physicians in the United States and Canada, a mortality of 17.14 per 1000. The average age at the time of death was over sixty, and the average length of practice over thirty years. Among the causes of death, "heart disease" is given as the most frequent, there being 205 cases attributed to this cause. Many of these were said to be due to "heart failure," sixteen were from angina pectoris and three from "fatty degeneration of the heart." Pneumonia heads the list of clearly defined diseases with 172 deaths, or 7.5 per cent. of the total mortality. Nephritis, including "kidney disease," was responsible for 91 deaths, and uremia caused 16. Tuberculosis is said to have been the cause of 90 deaths, all but 8 of which were from tuberculosis of the lungs. Cancer caused 39 deaths; typhoid fever, 37; septicemia, chiefly from operation wounds, 23; diabetes, 20; gastritis, 16; appendicitis and meningitis, 15 each; bronchitis and insanity, 11 each; hemorrhages and peritonitis, 9 each; asthma, influenza, locomotor ataxia, paresis, rheumatism and gangrene, 6 each; erysipelas, 4, and diphtheria and scarlet fever, 3 each. Of the total deaths, 95 are chargeable to accidents, 36 to suicide and 12 to homicide. Of the accidents, poison caused 21 deaths; railway accidents, 17; falls, 14; drowning, 10; street-car accidents, 8; runaways, 7, etc. Of the 36 physicians who committed suicide, 14 chose poison as the means; 11, firearms; 3, hemorrhages from cut arteries; 2, asphyxiation by gas; 1, drowning; 1, hanging. In 4 cases the method employed was not stated. During 1904, 12 physicians were murdered. This is 3 more than in 1903, and 1 less than in

1902. Of the 12, 10 died from gunshot wounds, 1 was stabbed, and in one case the cause was not stated.

The ages of the physicians varied between the limits of 22 and 104 years. The greatest number of deaths,57, occurred at the age of 60. Above the age of 70, 596 deaths; above the age of 80, 241 deaths; above the age of 90, 19 deaths; and 3 physicians had passed the age of 100, the oldest on record being 104 years old.

CO-OPERATION OF OHIO MEDICAL COLLEGES.

In view of the many interests which the medical colleges of Ohio have in common it would seem that an association of these colleges might be of mutual interest and profit. There has been great good accomplished for the cause of medical education by the American Association of Medical Colleges; but there still remains special work for the colleges of our own state.

The literary colleges have, for many years, held profitable meetings for the consideration of educational questions. There has been formed an organization of allied associations, some thirteen in number, which meets in holiday time of each year in Columbus. Would it not be well for the medical colleges of the state to organize and hold a meeting within the same week here in Columbus, as one of the allied bodies of this organization? At the last meeting of the Ohio College Association an invitation was extended to members of the medical profession to consider and discuss the question of the relation of medical and literary colleges. Following a paper upon this subject, there was such interest manifested that it was voted to devote one session of that association next year to the consideration of this subject; and doubtless, representatives of the medical colleges will be asked to participate in the presentation and discussion.

In the State of New York, such discussion is freely participated in each year at a convocation of the literary and medical colleges with the Board of Regents. We believe that such a consideration of the subject next year will be of great advantage to the educational interests of the state. Besides the consideration of this particular phase of the subject, the medical colleges have many other questions of common interest which might be considered, such as the curriculum, including a scheme of studies, for each year, length of the college year, methods of instruction, grading, etc.

With such an association of medical colleges, providing membership for all professors or instructors in the several colleges, an excellent opportunity would be provided for promoting educational interests common to all, to say nothing of the social advantages of a more extended acquaintance between educators in the literary and medical institutions of the state. We hope that the movement may receive encouragement.

A NEW MEDICAL JOURNAL.

We welcome among our exchanges a new journal, entitled, *The Georgia Practitian*, edited by Dr. Martin Cooley, of Savannah, Georgia. Its first issue of January 15th, of this year, gives promise of a clean, well edited and useful medical journal. The aim, as stated in the "Foreword," will be to supply practical, helpful papers, vertebrate timely editorials and actual book reviews. Their advertising is to be strictly ethical and confined to the advertising pages. No advertiser will buy his way into the reading matter pages. It will consistently aim to appeal to the more intelligent class of practitians, especially in the Atlantic seabord and Gulf states and earnestly attempt to supply such men with what is most recent in the literature of the day. The title of the journal itself will help to establish the use of "Practitian" in the place of the more cumbrous word, "Practitioner." Let us hope it may succeed in rendering the latter term as obsolete as "Musicianer," and in encouraging the profession generally to use the word, "Physician" instead of "Doctor," when properly indicated.

DR. S. A. KNOPF.

Dr. S. A. Knopf, who is to lecture to the Columbus public on "Tuberculosis" on the eighteenth inst., is a graduate of Bellevue Hospital Medical College, New York City, 1888; Faculty of Medicine, Paris, France, 1895; former assistant to Geheimrath Dettweiler Sanatorium, Falkenstein, Germany; visiting physician Riverside Sanatorium for Consumptives; consulting physician St Gabriel's Sanatorium for

Dr. Theodore Gaillard Thomas was born near Charleston, South Carolina, November 21st, 1831, and died Feb. 28, 1903.

Consumptives, Gabriels, N Y.; and National Jewish Hospital for Consumptives, Denver Colo.; honorary vice president of British Congress of Tuberculosis, 1901; honorary director New Haven Anti-Tuberculosis Association; vice president American Academy of Medicine; honorary fellow Maine Academy of Medicine and Science; honorary fellow Sociedad Cientifica "Antonio Alzate" of Mexico; corresponding member International Bureau for the Prevention of Tuberculosis, Berlin; fellow American Academy of Medicine, New York Academy of Medicine; American Medical Association; Medical Society of the Cóunty of N. Y.; New York County and State Medical Associations; Society of Jurisprudence, Societe de Medicine Publique et Hygiene Professionelle de Paris, and Laureate of the Academy of Medicine, Paris, 1895; College of Physicians, Philadelphia, Pa., 1898; International Congress to Combat Tuberculosis as a Disease of the Masses, Berlin, 1900; Institute of France, 1901.

At a meeting of the "International Congress for the Study of the Best Way to Combat Tuberculosis as a Disease of the Masses," which convened at Berlin, May 24-27, 1899, the sum of 4,000 marks was donated by two Berlin merchants, lay members of the Congress, as a prize to be offered for the best essay on the subject, "Tuberculosis as a Disease of the Masses and How to Combat it." Out of all the essays submitted, Dr. Knopf's was consdered the best and he was awarded the prize. Dr. Knopf chose as his motto, "To combat consumption as a disease of the masses successfully requires the combined action of a wise government, well trained physicians, and an intelligent people."

"FAITH CURISTS" TO BE REGULATED BY LAW.

According to a recent decision of the Supreme Court, Christian Science healers are placed under the operation of the state law regulating the practice of medicine. The action above referred to is that in which the court sustained the exceptions filed in the case of the State of Ohio vs. Oliver Marble, error to Common Pleas Court of Erie county, fixing the status of Christian Scientists in relation to their efforts in healing and curing the sick. In this case Marble was found guilty, in the Erie County Probate Court, of receiving pay for treating a man for illness. The Common Pleas Court, to which the case had been carried, reversed the decision of the Probate Court, and the suit was then brought before the Supreme Court with the above result.

Medical News Notes.

Dr. W. C. Heintz, councilman from the First Ward, is convalescing from typhoid fever.

Dr. C. A. Cooperrider has recovered from injuries received in a recent runaway accident.

Dr. G. A. Doren, Superintendent of the State Institution for the Feeble Minded, is recovering from a severe attack of grippe.

At the March 6th meeting of the Columbus Academy of Medicine Dr. James M. Rector was elected to membership in the Academy.

On March 10th the Junior class at Ohio Medical University gave a reception to the Seniors in the Assembly Hall of the university.

The Licking County Medical Society, at its January meeting, adopted a fee bill which provides for uniform charges for medical services.

Drs. C. O. Probst, Frank Warner and Prof. E. G. Horton attended the Havana, Cuba, meeting of the American Public Health Association January 14-15.

Dr. Pfeifer of this city was married Wednesday, Dec. 4th, to Miss Julia Taylor, at the bride's home, 231 Wilson avenue. The doctor's office and residence are at 371 E. Livingston avenue.

BERLIN'S NEW HOSPITAL.—It is said that the Rudolph-Virchow Hospital, which is now nearing completion in Berlin, will be the largest and most beautiful hospital in Germany. It will have accommodations for two thousand patients.

Dr. Frank McCafferty, who has been suffering from biliary obstruction, has returned from Martinsville, Ind., where he has been under treatment for the past three weeks, and is much improved.

At the February 20th meeting of the Columbus Academy of Medicine Drs. Clement L. Jones, J. J. Coons, I. B. Harris and Chas. F. Gilliam were elected to membership in the Academy.

The Medico-Legal Journal for April will contain the proceeding of the Psychological Section of the Medico-Legal Society.

This report contains many valuable papers on Spiritism, Hypnotism and Telapathy.

At his home on East State street, on March 1st, Dr. Starling Loving gave a reception and banquet to the students of Starling Medical College. Among those in attendance were: Governor Myron T. Herrick, Mayor Robeert H. Jeffrey, and Dr. C. O. Probst, Secretary of the State Board of Health.

Dr. John Inglis, of Pueblo, Colorado, formerly missionary to Pekin, China, stopped for a short time in the city on a recent trip to the East. While here, he spoke at the Y. M. C. A. meeting at the Ohio Medical University. Dr. Inglis has charge of a sanatorium at Pueblo for the treatment of pulmonary tuberculosis.

Dr. S. A. Knopf, of New York, under the auspices of the committee on Tuberculosis of the District Nurses Association, will deliver a lecture on "Prevention of Tuberculosis at the Columbus Board of Trade Auditorium, March 18, 1905. Dr. Knopf's reputation as an authority on this subject should secure for him a large attendance on the part of the physicians of Columbus and Central Ohio. The Columbus Academy of Medicine will give a reception in his honor at the Neil House at 9:30 on the same evening.

Columbus mortality report for January, 1905: Number of deaths from typhoid fever, 19; diphtheria and croup, 2; grippe, 4; tubercle of lungs, 23; cancer, 9; diabetes, 2; meningitis, 5; cerebral congestion and hemorrhage, 6; cerebral softening, 2; paralysis, 3; convulsions of children, 4; other diseases of the nervous system, 2; organic disease of heart, 21; angina pectoris, 2; broncho-pneumonia, 12; pneumonia, 23; asthma, 3; hernias, 2; affections of the liver, 4; Bright's disease, 9; senile debility, 5; lack of care, babies, 4; other causes, 1 each, 26; total, 192.

Recent Medical Books.

A HAND-BOOK OF SURGERY.—For students and practitioners. By Frederic Richardson Griffith, M. D., Surgeon, Bellevue Dispensary; Assistant Surgeon at the New York Polyclinic School and Hospital; Assistant Genito-Urinary Surgeon at the New York Hospital (Home of Relief); Past Acting Assistant Surgeon, Third Regiment Infantry, N. G. P.; Fellow of the New York Academy of Medicine; Associate Editor of the Medical Critic, etc.; with 417 illustrations. Philadelphia, New York, London: W. B. Saunders & Company. 1904.

This is a convenient work of 579 pages, admirably adapted as a working guide for the student and general practician. It includes in brief outline form the principles and practice of surgery; the essentials of the several subjects being presented in a concise and clear manner and in an attractive form. The illustrations are excellent and numerous.

THE OPHTHALMIC YEAR-BOOK—A Digest of the Literature of Ophthalmology with Index of Publications for the Year 1903. By Edward Jackson, A. M., M. D., Emeritus Professor of Diseases of Eye in the Philadelphia Polyclinic; President of the American Academy of Ophthalmology and Oto-Laryngology, etc. With forty-five illustrations. Publishers, The Herrick Book and Stationery Company, Denver, Colo. 1904.

This book furnishes, first, a critical digest of the most important literature of the past year, judging it from the standpoint of the ophthalmic surgeon: not extracts or an outline of that literature; but the important things, given sufficiently in detail to make them applicable in practice. Second, a list of the more important original communications appearing during the year. The design is to help the practitioner in this branch to keep up with the progress of his specialty; and with this to supply a series of volumes which will bring him in touch with all the more important recent communications upon any subject.

Ophthalmologists will find this a valuable index to the literature on ophthalmology for 1904.

STUDIES IN THE PSYCHOLOGY OF SEX—Sexual Selection in Man. I, Touch. II, Smell. III, Hearing. IV, Vision. By Havelock Ellis. 6⅜x8⅞ inches. Pages XII-270. Extra cloth, $2.00, net. Sold only by subscription to Physicianc, Lawyers, and Scientists. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

Studies in the Psychology of Sex will be complete in five volumes. Each volume is sold separately, and is complete in itself. Vol. I treats of Sexual Selection in Man, Touch, Smell, Hearing and Vision. The External Sensory Stimuli as Affecting Selection in Man are considered in relation to the four senses. He maintains that sexual selection is no longer a hypothesis concerning the truth of which it is possible to dispute; it is a self-evident fact. The difficulty is not as to its existence, but as to the methods by which it may be most precisely measured. It is the latter fact that the author is trying to determine in his studies on psychology of sex.

PNEUMONIA AND PNEUMOCOCCUS INFECTIONS. By Robert B. Preble, A. B., M. D., Professor of Medicine, Northwestern University. Illustrated. Publishers, Cloyd J. Head & Co., 40 Dearborn St., Chicago, Ill. 1905.

This little work on Pneumonia gives a practical outline of the disease and the modern methods of treatment.

DISEASES OF THE NOSE, THROAT, AND EAR and their Accessory Cavities. By Seth Scott Bishop, M. D., D.C.L., LL.D., Author of "The Ear and Its Diseases"; Honorary President of the Faculty and Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College; Professor in the Chicago Post-graduate Medical School and Hospital; Surgeon to the Post-graduate Hospital and to the Illinois Hospital; Consulting Surgeon to the Mary Thompson Hospital, to the Illinois Masonic Orphans' Home, and to the Silver Cross Hospital of Joliet, etc. Third edition. Thoroughly revised, rearranged, and enlarged. Illustrated with 94 colored lithographs and 230 additional illustrations. 564 pages, Royal octavo. Price, extra cloth, $4.00, net; sheep or half-russia, $5.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry St., Philadelphia.

The author has been pleased to present a third edition of this valuable work. Each and every subject has been brought up to date. The subjects are simplified and condensed so as to constitute this book a key, or introduction to the exhaustive treatises already in the field.

Ten chapters are devoted to Diseases of the Nose. Nine chapters to Diseases of the Pharynx. Eight to Diseases of Larynx, and seventeen to Diseases of the Ear. One chapter is devoted to Life Insurance as affected by Diseases of Ear, Nose and Throat.

EYE, EAR, NOSE, AND THROAT NURSING. By E. Edward Davis, A. M., M. D., Professor of Diseases of the Eye in the New York Post-Graduate Medical School and Hospital, and Beaman Douglass, M. D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. With 32 illustrations. Pages XVI-318. Size, 5½x 7⅞ inches. Extra cloth. Price, $1.25, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This little book will prove of valuable assistance to nurses as well as physicians. It contains many suggestions by way of intelligent care and nursing of the various diseases of the eye, ear, nose and throat that will prove practical to anyone.

For the nurses a brief outline of the anatomy and physiology of the eye, ear, nose and throat has been given.

A COMPEND OF THE DISEASES OF THE EYE AND REFRACTION, including Treatment and Surgery. By George M. Gould, A. M., M. D., and Walter L. Pyle, A. M., M. D. Third edition, revised and corrected. One hundred and nine illustrations, several of which are in colors. Publishers, P. Blakiston's Son & Co., Philadelphia, Pa. 1904.

Students will find this to be a very helpful little work on diseases of the eye. It describes simply and concisely the most important subjects in Ophthalmology.

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RECENT VIEWS AS TO THE ETIOLOGY OF DIABETES.

BY J. H. J. UPHAM, M. D.,

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The group of symptoms corresponding to what we now recognize as diabetes mellitus was probably first described as a separate disease by Aretaeus in the first century of the Christian era. Impressed chiefly by the marked symptom of polyuria, this observer and later Celsus, believed it to be the main lesion and that the waste of fluids was actually greater than the intake of the same. Paul of Egina in the seventh century advanced the idea that the disease was largely a quick passage of fluids ingested, voided practically unchanged, as he states in his definition, Diabetes subitus est potulentorum exitus, talibus per urinam redditus, qualia pota fuerant, of which a rather free translation by Eberle (1835) is, "Diabetes is a sudden discharge of fluids, voided by the urine, just as they were drank." For a surprising length of time this was the accepted theory; in the middle of the 17th century Sydenham said: "In a Diabetes the Juices brought to the Blood go off by Urine crude and undigested." About the same time John Allen concurs in the above, and quotes one Harris to the effect that 'A diarrhea was as it were a diabetes of the belly and a diabetes, a diarrhea of the kidneys." A little later, during this same century, a great step in advance was made in the discovery of the presence of sugar in the urine of diabetics (by inference from its sweetness), by the eminent English physician and surgeon, Willis, and this constituent soon became recognized as a constant and pathognomonic feature. Previously the recognized symptoms were the classical ones of polyuria, emaciation, great thirst, and voracious appetite, so that the disease was only diagnosed when well advanced, and was hence considered as very rare; even Galen with his enormous experience confesses to only having seen but two cases. After the discovery of Willis, however, less marked instances could be recognized and the condition was correspondingly more frequently met. Also certain varieties of polyuria unassociated with glycosuria could be differentiated, especially that form which we now designate as diabetes insipidus; the main test up until about one hundred years ago of the presence of sugar in the urine was the eminently simple one of tasting it, and one of the earliest references that I have noted of probably diabetes insipidus, I may mention in passing, is in Cullen's Practice of Physics of 1792, in which the author remarks naively, having a case of apparent diabetes in which the urine was not sweetish as was the rule but decidedly insipid.

In regard to the causation of diabetes the older writers were completely at sea, and almost entirely refrained from theorizing on the subject. They noted the predisposing action of heredity, bad habits, excesses, especially in alcoholics, etc., but of the exciting cause or causes, or even of any characteristic lesion they frankly acknowledged their lack of knowledge. Cullen indeed, said in 1792, in the work I have already referred to, "As I have already said, I think it probable that this disease is some fault of the assimilatory powers, or in those employed in converting alimentary matters into the proper animal fluids."

Some superficial observer might say that that is all that we may really say at the present time, and that our boasted progress has been, so far as diabetes is concerned, simply moving in a circle; such may indeed have been partially true up until comparatively recent years, but now we may assert that the tireless work of numerous investigators, trained and equipped as never before, gives promise of an early discovery of the solution of the perplexing question. Much has been done to narrow down the problem, and it would seem that the right track has at last been found.

Glycosuria, which since the discovery of Willis, has been recognized as he most prominent symptom of the disease, has also been found to be present in other and less serious conditions; indeed improved methods have shown sugar to be normally present in the urine in quantities usually too small to respond to our ordinary tests, but capable of increase in amounts physiologically so that it may be readily detected. This sugar is derived directly from the blood, which contains normally from 0.12 to 0.2%; any increase above the latter being called a hyperglycemia. The blood of the portal system contains a higher per cent. of sugar after eating, from the absorption of the products of carbo-hydrate digestion; this difference was first explained by the distinguished investigator Claude Bernard, who discovered the important fact that the liver removed a large portion of this sugar brought to it by the portal vein, storing it up within itself as what he called *glycogen*, a sort of animal starch; it was shown later that the muscles to a less degree exercised a similar function, and that they with the liver formed a system of reservoirs for a reserve supply of this substance, which is readily transformable back into sugar and hence the latter is thus ready on demand as occasion requires for the production of energy. These reservoirs are, however, of a limited capacity, and if excessive quantities of sweets are ingested a hyperglycemia results and persists until the excess passes off, chiefly through the kidneys, and equilibrium is again established; in the meanwhile there exists a temporary or "alimentary" glycosuria. The amount of sugar required to cause this condition varies in different individuals, and the reason therefore may be readily understood if the recent theory as to the etiology of the majority of cases of diabetes is found to be correct. I shall refer to this point again.

Pathologically glycosuria of a more or less temporary character may be caused by numerous conditions preventing or interfering with the normal storing up of glycogen in the liver, or inducing an excessive discharge of the same with its reconversion into sugar in the blood, such as in some fevers, certain diseases of the liver, sometimes in pregnancy, chlorosis, traumatism, the excessive use of alcohol, the presence in the circulation of certain poisons, and in some nervous lesions. The last named being illustrated by the famous "piqure" experiment of Bernard, who you remember discovered by this procedure that the puncture of the floor of the fourth ventricle near the calamus scriptorius would induce a temporary glycosuria; this fact has since been repeatedly confirmed and extended by the discovery, by other observers, that a similar stimulation of portions of the medulla and cord would produce a like effect. To be considered diabetes, however, the glycosuria must persist in spite of the removal of any evident cause or regulation of the diet.

The difficulties in the way of ascertaining the exact causes of diabetes lie largely in the complexity of the carbo-hydrate metabolism. Physiological chemistry has traced the changes of the food-stuffs in the series of alterations necessary for their assimilation more or less satisfactorily as far as the proteids and fats are concerned, but not so completely regarding the carbohydrates. The absorption of the latter into the blood as glucose is conceded, the deposit of the excess of this product as glycogen is well known, the reconversion of glycogen to glucose by means of a hypothetical glycolytic ferment is probable, but some further change at present unknown is necessary before the sugar of the blood is taken up by the tissues. It has been proven that the sugar does disappear from drawn blood through some final chemical action, and if this terminal product could be discovered and the character of the reagent, if I may use the term, could be definitely ascertained, the greatest obstacle in the way of the solution of the problem would be removed; for diabetes appears to be chiefly dependent on the inability on the part of the tissues to assimilate the sugar absorbed; the consequent loss of the body's chief chemical source of energy explains the progressive weakness; the loss of sustenance, together with the increased catabolism of the adipose tissue with absorption of the products for the instinctive effort to produce within the body the needed sugar, account for the emaciation; the exaggerated hunger, often especially for sweets, is the craving of the tissues for the same; the hyperglycemia resulting from the non-assimilation of the sugar acts irritably on the renal epithelium, causing the polyuria, while the excessive loss of fluids necessarily demands the drinking of corresponding amounts of water or other liquids.

The assumption of the presence of this enzyme or other body which causes the final change in the sugar of the blood is regarded favorably by a great many observers, not only because it is certainly the most logical conclusions, but also because of the inability to discover any other theory that is at all tenable. For example, the kidneys were long thought to be the organs at fault in this disease, owing to the prominence of the symptom of polyuria, and the not infrequent degenerative changes found in the renal tissues. It has been satisfactorily demonstrated that the former, however, is the result of the irritating action of unassimilated sugar in the blood, and that the degenerative lesions found in the kidneys are not constant in diabetes, are usually seen in advanced stages of the disease, are not distinctive of diabetes, but on the contrary are indicative of one or another form of nephritis, and in fact are the result of the prolonged over-activity of the organs and hence are not the cause but rather the result of the diabetic condition.

While experimentally there may be a possible renal origin of some cases of temporary glycosuria, the occurrence of a renal diabetes regarded at present as doubtful; is as Lepine says, "There may be a renal element in diabetes, but it is scarcely correct to speak of a renal diabetes."

The liver has from time to time been very widely considered the probable organ at fault by many former and even present observers, because it also in so many cases of the disease has been found the seat of marked chronic changes, and also on account of its known connection with carbo-hydrate metabolism. The latter, however, appears to be chiefly the conversion of the excess of glucose in the portal vein to glycogen, storing up the latter and on occasion yielding it again to the general circulation, and doubtless by non-activity of this function may readily allow the passage of the excessively sweet blood from the portal system into the general circulation, thus producing a general hyperglycemia and glycosuria dependent on the amounts of carbohydrates ingested and therefore a form of alimentary glycosuria rather than diabetes, for in the latter the hyperglycemia and glycosuria continue even when there are practically no carbohydrates being taken in, and hence no higher per cent. of sugar in the portal vein than elsewhere; also all of the pathologic changes found in the livers of diabetics may be found in those dying of other diseases without even the symptom of glycosuria. Hence therefore while no one may say that the liver may not play some part in diabetes it is probably minor as far as the causation is concerned, and largely secondary to other pathologic forces.

Ever since the discovery of Bernard, the nervous system has been suspected of being in some unknown way a factor in the production of the disease under discussion. The glycosuria, however, that results from such nervous activity, through more particularly the sympathetic fibres connecting with the central nervous centres, seems chiefly to be due to an excessive discharge of the glycogen laid up in the liver, and lasts only so long as the effects of the stimulus continue or there remains glycogen to be discharged. Nevertheless the occasional finding at autopsy of brain tumors and other cerebral lesions in connection with case of undoubted diabetes, with no other at present demonstrable pathologic condition, necessitate the acknowledging of at least the possibility of a nervous origin in some cases, for want of a better explanation.

Considerable attention has recently been directed to the adrenal glands in various diseases, and especially in regard to any possible connection with diabetes, since it has been shown that the extract of these organs injected subcutaneously, intraperitoneally or painted on the surface of the pancreas acts simlarly to such toxic substances as potassium cyanid, phloridzin, etc., in producing a temporary glycosuria. Investigations along this line are still however incomplete; the experiments of Herter and Wakeman (Am. Jr. Med. Sci., Jan., 1903), may be cited to illustrate the above, the authors acknowledging the lack of definite conclusions to be drawn from their investigations, stated that they were unable to explain the mode of production of the induced glycosuria but concluded that the extract had no direct action of itself, but effected the results in some way through the pancreas either by means of the nervous system or by direct action on the cells of that organ.

It is the pancreas, however, that is the hope of the holders of the hypothetical enzyme theory, and it is certainly true that the investigations carried on since 1889 as to the physiological functions of this organ have been exceedingly and surprisingly fruitful in results, and at last seem to point to the satisfactory explanation of a large number of cases of diabetes at least. The ordinary functions of this gland were not at all well understood until comparatively recent years, and the discovery of its production of three such important substances as trypsin, steapsin, and amylopsin naturally seemed to exhaust its possibilities and but little further consideration was given it. The work, therefore, of van Mehring and Minkowski in the year 1889, and carried on somewhat more completely by the latter in 1893, came as a surprise. Other observers soon verified their experiments, and it has now been well established for several years that extirpation of the pancreas, or the greater part thereof will bring about at once a state of diabetes. Now I would emphasize this fact; all of the important experiments in other directions showing some bearing on the etiology of this disease succeeded merely in producing a glycosuria, usually temporary in character, but after the removal of the pancreas there follows not only a persistent glycosuria, but a hyperglycemia, polyuria, great thirst, hunger, emaciation, and weakness as well. In other words, one may now for the first time cause experimentally a typical state of diabetes. In following the work started by von Mehring and Minkowski, seeking the reason for the extraordinary results of their experiment, the loss of the most prominent product, in fact the only obvious one, was naturally considered the cause of the disturbances, but this was soon shown not to be the case.

The pancreatic duct may be ligated, or a fistula established so as to prevent absolutely the entrance of any of the secretion into the intestine; or the head of the pancreas with the main ducts may be removed and the splenic end be transposed subcutaneously, and provided that a fourth or a fifth of the gland be left and its circulation be not too greatly interfered with, no diabetes results. The last named experiments show that a comparatively small proportion of the organ is capable of carrying on the essential function, and that this proportion varies in different individuals, just as also the size of the pancreas similarly varies; this fact may explain why alimentary glycosuria may be more readily induced in some individuals than in others, i. e., by the presence in some of a lessened quantity or quality in the gland of the necessary constituents.

If, therefore, as shown by the above, the loss or inhibition of what we term the pancreatic juice is not the cause of the metabolic disturbance there must be something else produced by the organ that is in one way or another an essential agent in carbo-hydrate assimilation, and the only solution is in a hypothetical internal secretion poured into the blood, analogous to the acepted theoretical internal secretions of the thyroid and adrenal glands. Now if you remember the histology of the pancreas there can be but two sources of such secretion. Its structure is similar to that of the other glands, particularly the salivary glands, and is divided into lobes and lobules with a connective tissue stroma, the latter of relatively small amount in the human subject. The parenchyma consists of chiefly of acini made up of epithelial cells grouped about a lumen connecting with the terminal ramifications of the ducts. All of the products of the activity of these cells pass down the ducts and make up the pancreatic juice, and therefore from the above experiments these cells may be excluded from further consideration. The only other apparent source of the suggested internal secretion must be the obscure clumps of cells situated here and there within the lobules and commonly referred to as the islands of Langerhans. These clumps are composed of epithelial cells derived embryologically from the same source as the cells of the acini, but having seemingly lost their connection with the ducts and developed a close relation to capillary bundles. Efforts to demonstrate any secretion of these structures have thus far been fruitless, but the assumption that they are the producers of the internal secretion or enzyme so essential to normal metabolism has considerable supporting evidence. As already stated the regular secreting cells having been excluded, there appear to be no other secreting cells in the organ capable of giving rise to such a substance; the study of the embryological development of the pancreas shows these islands of Langerhans to be composed of parenchymatous cells, therefore secreting cells, but having departed in type from the surrounding cells their function likewise would be differentiated; and having lost their connection with the ducts they would no longer pour their secretion into the common outlet but into either the lymphatic channels or the blood. The study of the pathologic changes met in various conditions and diseases of the pancreas however does still more to support the theory. The most frequent morbid change found at autopsy is a state of chronic pancreatitis, usually associated with a like condition in the other vital organs; this is characterized as elsewhere by the laying down of connective tissue in large amounts throughout the gland, and according to the distribution of the same there have been described two forms of chronic pancreatitis, (1) the inter-lobular, and (2) the intra-acinar; in the former there are large bands of the connective tissue present which often compress the parenchyma and cause widespread atrophy of the cells of the acini, but do not tend to affect the islands of Langerhans except in very advanced cases, when they too become invaded. Often the relative amount of connective tissue to be found is surprising before the sclerotic process involves these structures, and if diabetes be present in such instances it will usually be found from their clinical histories to have been a late or terminal development. The second form of pancreatitis, the intra-acinar, varies chiefly in the arrangement of the new-formed cicatricial tissue; in it the latter is more diffused, arranged in smaller bundles, which tend to invade the acini. The islands are much more apt to be early invaded, and microscopically the fine bundles of connective tissue may be seen within them, separating the cells and often leading to degenerative changes. This variety is somewhat analogous to hypertrophic cirrhosis of the liver and may be associated with it, due probably to the same cause.

Another morbid condition found in the pancreas in quite a large per cent. of cases of diabetes, and seemingly associated only with that disease, is a peculiar affection of the islands of Langerhans, in which there appears a deposit of what has been thought to be a hyaline material, apparently between the capillaries and the remaining cells of the structure; the amount of the deposited substance being in exactly the indirect ratio to the cells that are left, the more of the former the less of the latter. The exact character of the hyaline material is obscure, but from certain staining peculiarities it would seem to be probably a degenerative change of the cells of the islands rather than a new deposit. It certainly would appear to greatly interfere with the function of the islands, inasmuch as in some cases of diabetes it is the only pathologic lesion to be found in the pancreas, and in others it may be the predominating one; if present in to at all a well marked degree diabetes seems always coexistent.

Other pathologic findings in the pancreas in cases of diabetes are not infrequent; such as malignant growths, cysts, etc., which often by pressure cause atrophy of extensive areas of the organ, both the cells of the acini and of the islands being then indiscriminately involved.

To summarize: The pancreatic theory of the origin of diabetes rests upon a hypothetical internal secretion having its origin in the islands of Langerhans of the pancreas, and which may act in one of two ways, either first, by acting on the sugar in the blood so as to convert it into some new substance for final assimilation by the tissue cells, or second, by antagonizing or neutralizing some substance present in the body, probably toxic in nature, which tends to prevent this change in the blood-sugar. In either instance this internal secretion is absolutely essential to carbo-hydrate metabolism, and its absence brings about that chain of symptoms which we denominate diabetes. The islands of Langerhans may be congenitally lessened in number so that we may have all gradations from an idiosyncrasy to alimentary glycosuria to a diabetes developing in very early life.

Chronic pancreatitis, analogous to interstitial nephritis or hepatic cirrhosis, and often associated with either or both, is not always accompanied by diabetes; when it is, the latter is usually a late product following the final invasion of the islands by the progressive growth of the connective tissue; not infrequently the greater part of the acini being almost completely atrophied before this takes place. Chronic pancreatitis of the intra-acinar type is much more apt to be accompanied by diabetes because of the much earlier invasion of the islands. Other changes affecting the islands, such as an apparent hyaline degenrations of the cells, obscure in origin, or atrophy, the result of pressure from neoplasms within or without the pancreas, are not infrequently associated with diabetes.

Lastly, alcohol, syphilis, etc., may be etiological factors indirectly by producing one or the other forms of pancreatitis, but possibly some other toxic substances may act directly by inhibiting activity of the island cells or by antagonizing their secretion.

Unfortunately there remains a certain per cent. of cases in which one may find no sufficient lesion whatever of the pancreas or elsewhere and therefore we must confess the possibility of other factors in such, as nervous, hepatic, etc., unless indeed in these the absence of lesion may be explained by the discovery of the presence of a toxin acting in the manner just stated above.

THE MEDICAL STUDY AND CARE OF INEBRIETY.*

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In medical circles there is a general impression that the disease of inebriety is confined to a very few persons, and is so complicated with insanity and other brain changes that it cannot strickly be called a disease per se.

Many physicians who with myself have urged the disease theory of inebriety, have been severely criticised as extremests, who are trying to formulate a new disease out of a mass of moral and ethical weaknesses. To such critics, and to the profession generally, it would be startling to know that the disease theory was urged at least eight thousand years ago. The researches of the Egyptian Exploration Society, consisting of the uncovering of the tombs and deciphering the characters of the papyri found therein, show that the disease of inebriety was recognized and studied at least five thousand years before the Christian era.

The religion of that ancient civilization taught that the body must be preserved and cared for after death, so that the soul after long ages could come back and take possession of the tabernacle which it vacated at death. In this way the magnificent monuments, tombs and temples where the dead were buried, covering many hundred miles of country, were made the recepticle of inscriptions, carvings, pictures and papyrus roles, containing a history of events in the lives of the dead, and what was done and said at that time.

Some of these papyri are records of the great events in the lives of certain kings, giving their decisions, and the reforms they brought about. On the walls of one of these tombs is a description of the drunkenness of the monarch of that time, and the efforts of a son to cure his drink madness, with success. The drink craze was said to follow from an injury to his head received in one of the wars, and the recovery from this injury was followed by sobriety. The son, who was afterwards a reigning monarch, declared that drunkenness came from some injury to the brain, and that it should receive physical treatment. Many of the tombs contain pictorial representations of inebriates being brought home on the backs of servants, and treated by water being poured over them, and the use of medicine to produce vomiting and purging. Other pictures show that sweating was used, particularly the steam bath and flagellation, with rubbing and kneading of the body. Other tombs contain notes of enactments by which persons who drank to excess were confined and given showers of water daily, for a long time.

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Both grapes and barley grew luxuriantly in the valley of the Nile, and beer and wine was a very common drink. A very curious fact appears that the city of Queede was famous for nearly a thousand years for the excellence of its beer. This city and its location has long ago disappeared.

From the fragmentary records already interpreted, it is evident that inebriety and its physical causes, and the drink evil, was the subject of intense study and anxiety many thousand years ago. It is evident that they understood many of the physical causes of this disease and used some modern methods for its control and suppresion. The occupant of one of these tombs, no doubt a priest, who in those days practiced medicine, is mentioned as having had great skill in the treatment of persons who suffered from wine and beer madness. It is mentioned that he had a special dwelling or temple constructed on the banks of the Nile, where persons suffering from this malady were given appropriate treatment. This was the first inebriate asylum, and the first doctor in this field of medicine, that we have any record of, and dates back to over six thousand years ago.

These, and many other startling records can be found in the Books of the Dead, published in German, containing the records of the papyri, and the pictures on the walls of the tombs, ten columes of which have been translated up to the present. Although these records are fragmentary, they afford abundant evidence that inebriety as a disease was studied in the very dawn of civilization. The modern study of the disease theory appears in the records of early Grecian medicine. Many of the fathers of medicine including Hypocrates and other worthies, describe the drink craze as a disease and madness which should be treated and cured by remedies.

During all the golden days of Grecian civilization, when wine and its use were associated with poetry and song so intimately as to influence all the after civilization of the world, there were frequent references to the disease which followed from its use, and also the possibility of restoration by the use of physical means.

In the Roman civilization, Ulpian, a noted senator, has left on record a strong appeal to the state to recognize the physical disease of inebriety, and provide for its treatment by state measures and means. This was in the second century of the Christian era, and it was evident that his views were partially recognized in some of the laws that were passed, and his writings still extant, show that he had a very clear opinion of the sickness of inebriety and its proper treatment. From Ulpian's time down to the last century, in almost every age, mention has been made of drink madness, and the need of forcible physical means for its treatment and cure.

Philosophers, physicians, kings and statesmen have left on record opinions of the theories of this malady and how it should be treated, which when written out will form a very interesting chapter, showing the growth and evolution of this great truth in science.

It is a curious fact that inebriety and drunkenness or alcoholism, (all names for the same condition) were regarded as a disease long before insanity was thought to be other than a spiritual madness.

Dr. Rush, of Philadelphia, in 1799 and 1809, urged the modern study of a subject which has come down to use from the earliest Egyptian civilization. Condilac, a French philosopher, and Salvator of Moscow, both wrote books defining the disease of inebriety, and urging its medical treatment.

The English Lunacy Commission in 1844 recommended that drunkenness be considered a form of insanity, and treated as such. Finally in 1860, through the efforts of Dr. J. E. Turner, the first inebriate asylum of the world was organized at Binghampton, N. Y., and later opened for the medical treatment of this disorder.

For over twenty years, the theory of disease encountered the sharpest opposition, not only by medical men but from clergymen and others. Then reaction took place, and the second stage come on in the history and growth of this great truth of science. This was the empirical stage in which an army of quacks claiming to have discovered specific remedies, occupied the field. This stage is now passing away, and a third is appearing in which critical inquiry and recognition on scientific lines will follow.

A most interesting chapter will be written describing the growth of this scientific truth, through the various stages of denial, contradiction, credulous acceptance, final critical inquiry and scientific recognition.

While inebriety has been recognized in Europe as a disease amenable to cure, the study and application of the facts have gone on to higher levels in this country, and we are now leading the van of scientific progress in the world along these lines.

At the present time it would seem more practical to give an outlined view of the clinical aspects, particularly of causes that constantly come under our observation, and to indicate some general plan of treatment, and means and measures essential to understand these cases.

Acute cases come most frequently to the recent graduate or to the young man in the early years of practice. The more chronic cases appear to the older physicians, and are often sources of great annoyance. In all cases there are several general questions which appeal for an answer in the scientific study and care of each case.

First, the present condition of the patient, what organic and functional derangements are present, and how far these disturbances affect the reason and power of control? Second, what are the peculiar effects of alcohol or other drugs on the brain and nervous system? Third, are the present symptoms the direct results of spirits and drugs, or how far are they symptoms of other causes? Fourth, what neuroses and predisposing hereditary conditions have been active or leading factors in the history of the person?

Answers to these questions will point out many indications of the means and methods to be used in the treatment. Most persons, appearing for treatment suffer from gastritis, motor palsies, defective nutrition, and general exhaustion. The use of narcotics may conceal these conditions, and give the impression of relief, but the causes will continue as before. If the spirits are stopped at once, and tinctures substituted, the relief will still be temporary.

If the history of the case indicates that spirits were taken to relieve disordered conditions, and that their continuous use has produced new complications, new indications will appear. Should a farther study point out a neurotic inheritance, from alcoholic ancestors, or insane, epileptic or consumptive heredity, the therapeutics will change.

A number of persons have urged the free use of narcotics at the beginning of the treatment, and when the acute symptoms subside, the application of moral remedies such as the prayer, the pledge, or conversion. The profound impression often created on the mind of the certainty of recovery, by these means, particulary at this time, rarely stands the test of time.

The exceptional cases which occur, simply indicate that the drink craze has died out in obedience to some unknown laws, and that the last remedy used was not the curative one. Where the drink craze is a symptom, its disappearance with or without causes is likely to occur, but the real causes are practically unknown.

The treatment of the acute symptoms at the beginning, by the removal of the active causes, and the elimination of the poisons is only preliminary, and affords an opportunity for an accurate study of the diseased conditions present. The first inquiry will determine whether the drink symptom is the first stage of general paresis, or another form of melancholia and dementia, and also whether the drink symptom tends towards or indicates delirium, suicidal or homicidal impulse, or other forms of dementia.

Intimations appear in persons poisoned with alcohol of local inflammations, particularly in the nasal cavities, lungs, kidney and liver, or the palsies of certain motor or sensory nerve tracts. The observer will be astonished at the sharply defined symptoms of some specific forms of degeneration and disease which appear more or less distinct in each case.

The question of disease comes out with prominence from an examination of the tabulated histories of a large number of inebriates. Tables are compiled giving the inherited predisposition and ancestoral history of diseases; the early nutrient defects and changes, diseases and injuries, together with training or absence of training, environment and other forces which are active in the growth and development of life.

The first use of spirits, the supposed causes, and the later development, or growth, and tendency of this symptom or condition, together with all other facts influential in the development and growth of the individual, are added to the above.

From these tables there appears a startling uniformity of causes and progressive movement from certain points of origin and development, on through distinct stages that follow each other with a certainty which only comes from the presence of laws. There can be no chance or accident here. It is degeneracy and disease, moving along lines as fixed as that which guide the stars.

This degeneration must be a disease, and while it is impossible at the present time to mark out all the causes and indicate the exact movements of these degenerative forces, we can prdict with great certainty the growth and termination in many instances.

To return to the clinical aspects of cases which appear in our every day observation, there are certain pathologic conditions so constantly present that their absence must be an exception to the rule. One is palsy of the vaso motor and sensory nerves, with deranged vascular circulation.

Notwithstanding the doubts recently expressed in some circles, in my experience the use of spirits always produces arterial scleroses and fibernous deposits in the coats of the arteries of the brain, and in both the liver and kidneys. The continuous vaso motor, paralysis of the arteries and veins ot the face, from the use of spirits and their final degeneration is an index of what occurs to a greater or less degree in the vascular and venous systems of the body.

Another condition not so marked but present in all inebriates in various stages and degrees, is irritation, inflammation and degeneration of the nerve terminals, particularly of the extremities. This is called neurities, and is manifest in a great variety of symptoms commonly called neuralgias, rheumatisms, and like disturbances, either painful or otherwise, of the nerve trunks and its termination.

A third condition which has not attracted much attention is derangements of the metabolism of the body. Foods are not properly digested or assimilated. There is an increase of waste matters. The chemical changes are broken up, and the development of ptomaines is encouraged. Elimination is diminished, and both the quantity and quality of protoplasm matter is defective. The use of alcohol always disturbs nutrition, although its effetcs may be concealed for a long time.

A fourth condition is common, although not often considered serious, namely, the derangement and enfeeblement of the heart. I have never seen a person who had used spirits for any length of time who did not have an enlarged or shrunken heart. At all events its functional activity was permanently broken up, and although the heart beat was apparently normal, the pulse tracings and arterial tension indicated abnormality and disease.

These four conditions will be found in different degrees in all persons who use spirits or drugs either continuously or at long intervals. While there may be exceptions, its presence as a rule can be depended upon. The general statement is true, that all persons who drink to excess are both poisoned and starved.

These are the general pathological conditions present in all cases appearing for treatment. The first indication is to promote elimination of the poison and counteract the vaso motor paralysis of the arteries. Baths of hot or cold water, massage, hot packs, are among the most valuable means for this purpose.

(To be continued.)

ENDOMETRITIS.*

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Endometritis proper consists of inflammation of the mucous membrane of the uterus, yet the inflammation is not absolutely limited to the mucous membrane, but extends into the substance of the organ and is accompanied by more or less active hyperemia of the whole uterus. Endometritis and metritis are therefore scarcely separable affections, but the terms may be used respectively to indicate the preponderance of the inflammation of the mucous membrane or of the parenchyma in different cases.

The different classes of inflammation are acute and chronic. As gynecologists, we do not see as many acute cases I believe as chronic. It is not until it has become chronic that medical aid is usually sought.

The two special varieties are cervical and corporeal. One would naturally suppose that in endometritis the inflammatory process, when once begun at any part of the mucous membrane, would extend to the whole endometrium, but such is not the case. Clinical observations show that cervical endometritis frequently occurs without corporeal, and vice versa, or they may occur together.

It is a question whether limitation of the inflammation to the body is as frequent as is that to the cervix. Thomas believes that limitation of the inflammation to the body alone is more frequent. In my own practice I have not found it so. There has been much discussion regarding the pathology of endometritis, both cervical and corporeal. Skene says, "Much of this difference of opinion arises from the use of the term. Some claim that the only lesion in this affection is congestion, others claim that there is true inflammation. It is known that in the ordinary inflammation of the mucous membranes there is first congestion, then hypersecretion, then suppuration or purulent secretion, occasionally ulceration, then recovery. If this is taken as a typical result of inflammation of the mucous membranes, then endometritis is rare; but when the process of inflammation in mucous membranes begins in some cases and progresses only to congestion and hypersecretion, and these are long continued, certain changes in the mucous glands, epithelium and cellular tissues take place, but suppuration or ulceration does not occur as a rule in endometritis."

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*Prepared for the Ninth District Medical Meeting held at Portsmouth, Ohio, November 8, 1904.

Chronic catarrhal inflammation of the endometrium in the married woman is a well-known disease, and has been described in the text-books for many years as a cause of sterility and as the result of certain injuries incurred during parturition; imperfect involution after confinement or menstruation; this is probably the most important result; the use of ill-fitting pessaries; abortion, especially if produced; displacement of uterus; excessive coition, especially if means for the prevention of conception are employed; gonorrhea and syphilis. The predisposing causes being anemia; prolonged lactation; frequent parturition; debilitating diseases such as tuberculosis, cancer and convalescence from acute diseases.

Schroeder thinks climate seems to exercise a more or less direct influence. He says, "That chronic endometritis is observed with relative frequency in damp cool regions, such as Holland, Belgium and certain parts of England. Europeans who reside in hot climates, for example, the English women living in India, are said to be affected with leucorrhea to a degree entirely out of proportion to local or constitutional causes."

These many causes, together with their effects and treatment being so minutely described in all modern text-books on diseases of women, and so very common, are familiar to us all, and need not be commented on further.

It is not to be wondered at that the married woman, subject to these many causes, suffers from endometritis. But why do virgins suffer with this inflammation? We are aware that endometritis does occur in the unmarried. And yet, there is very little literature upon the subject. The text-books scarcely, if at all, refer to the occurrence of the disease in virgins. Are we as a rule aware of the frequency with which these catarrhal changes of the endometrium occur, or of the symptoms which they produce, or of the importance of recognizing and correcting these symptoms?

Does not the improper habits of life have much to do with it? It is not an uncommon occurrence for a young girl, especially the society girl, who keeps late hours, eats midnight lunches, dances every dance, improperly dressed (not so much for dancing but sitting in the windows to cool off), whereby the blood is driven into the interior of the body, congesting the uterus along with other organs; tight lacing, which interferes with respiration and circulation, also displacing abdominal organs, to consult her physician for relief from, that tired feeling increased with the least exertion, nervousness, changed disposition, headache, insomnia, lessened mental activity, backache and one of her worst troubles, a thick, dense, opaque and tenacious or serous, non-tenacious and somtimes a purulent leucorrheal discharge, or disturbed menstruation. Not only the society girl is heiress to these symptoms, but in the shop girl, school teacher, servant, the constant standing, undue exposure, and excessive fatigue serve as an efficient exciting cause. With such a list of symptoms it is not difficult for the physician to know that some uterine affection exists, which, if it does not yield promptly to constitutional treatment, demands further investigation in order to settle definitely its source. It is a universal practice, and with which on the whole, within proper limits I concur, that the sexual organs of a young girl should not be subjected to local interference by the gynecologist, and still there are limits to this rule. In all ordinary cases first try to find all that can be found of the patient's life, her surroundings, her inclinations, her troubles and anxieties and then her general health. Remove as far as possible the cause, if found, and then give constitutional treatment. Constitutional remedies, as we know, act upon the uterus only so far as they improve the general nutritive and nervous systems. But when more severe symptoms present themselves which cannot be controlled by such treatment, then a local examination should be made. A digital examination while very useful to detect position and tenderness is not a sufficient means for a perfect diagnosis. Speculum examination following a digital, affords the best means of ascertaining the lesion. A slight inflammation may be seen just within the external os, there may be eversion, redness and erosion with little or exersive secretion. The lips of the eroded cervix may be broad and separated, presenting a distinct bilateral cleft simulating closely a puerperal laceration or may be attributed to be a congenital malformation of which Fischel of Prague, Mundie, and Penrose speak. There may be no lesion visible, but passing a sound, shows abnormal tenderness, dilatation of os, enlargement of uterine cavity and increased vascularity of mucous membrane, which bleeds readily upon touch. The most important symptom by which the differential diagnosis between cervical and corporeal endometritis can be made is derangement of the menstrual function. This flow may be scant, profuse, of long duration, too frequent, prolonged intermission, or painful. The profuse, prolonged and painful more often occur. In this, careful examination must be made in the differentiation of fibroid, polyp, cancer and endometritis. This is best made by the use of the probe, curette and microscope.

Not only is the diagnostic skill of the gynecologist brought to bear upon these cases, but the practitioner's skill as a physician in the widest possible sense of the term is called into requisition.

In women of a lymphatic type of organization, a relaxed state of the mucous membranes with constant hypersection is not an uncommon symptom of slight constitutional disturbances, but when this is observed in connection with the uterus it is too often considered as a symptom of endometritis, while reallv a true endometritis does not exist. Then again, curettement has even been resorted to, to cure chronic catarrhal discharges; these as we know are not infrequently associated with corresponding conditions of other mucous tracts depending upon some constitutional dyscrasia such as anaemia, tuberculous disease or some other disorder that tends to a generally lowered state of vitality.

A correct diagnosis is of first importance to a successful treatment. The careful and conscientious practitioner will constantly bear in mind the interdependence of all the organs and tissues of the body in health and disease. The cause of the disease having been recognized, the proper treatment suggests itself. The improper or faulty habit of life, must if possible, be corrected. If patient is anemic the iron preparations and arsenic are indicated together with plenty of fresh air or perhaps change of climate. Rest in bed should be inforced if symptoms are acute and exercise gives pain. The nutritive and nervous systems must be improved first and if these measures faithfully employed does not cure, then local treatment must be resorted to.

Many of these office cases can be cured within a short period, but again it requires a longer time and in the severer forms of the disease nothing but curettment will produce a cure. The non-operative treatment is practically confined to direct applications to diseased areas. There does not seem to be as much difference of opinion to the direct application in cervical endometritis as in that of corporeal.

Am sure many satisfactory cures have been effected by local treatment especially in cervical endometritis.

One of my most successful cases was that of a school teacher who had suffered for ten years with such severe dysmenorrhoea that she was often compelled to be absent a half day from school each month, or, if at school taken home in a cab. After four local treatments, two each week, with Battey's sol. for an eroded cervix, the dysmenorrhoea ceased, there has never been any pain since and no leucorrhoea, which had formally been profuse.

The conjestions, the cystic degenerations, the erosions and the accompanying enlargements are all favorably influenced by local depletion and local alteratives such as hot vaginal douches, pledgets with boroglyceride, glycerin or ichtholdine and, in selected cases, puncture. The alteratives, Churchill's tinct. iodine, tr. iodine and carbolic ac. are perhaps used more often than any other preparations. But silver nitrate must not be overlooked.

One of the most essential things in connection with local treatment is rest, and yet, it is usually the most difficult to secure. If all these measure fail, then curette.

Curettement alone may not cure all of them, but followed by local and constitutional measures as are indicated, will.

The hemorrhagic form while the most obstinate to cure by local treatment sometimes is cured as if by magic by curettement, and while I protest against the tendency to curette every girl that suffers with even a severe endometritis yet, when it is indicated, I do not hesitate to do it. And yet there is no pelvic symptom that is so frequently taken as an indication of the presence of disease demanding curettement, and yet none that in more instances may be merely a uterine expression of a general condition, or of a diseased state of some distant or neighboring organ, than hemorrhage from the uterus. Have seen case of villous endometritis which were not cured until after two or three curettements. One case, a young lady 20 years old, blond, slender build, tall, consulted her physician on account of profuse menstruation at various periods. Sometimes the hemorrhages would be so great as to prostrate her and she would become quite anemic. Constitutional remedies in no way controlled flow. Even rest in bed seemed to do no good. Upon examination, uterus was found slightly retroflexed, no enlargement, no ovarian tenderness, external os gaping with some erosion. While a curettement was advised but not strongly pushed at the time it was not accepted and at the next period the physician was hastily called on acocunt of patient's condition, she had been menstruating about four days and flow still increasing; she was very enemic, pulse so feeble that curettement was strongly urged and accepted. The uterus was then greatly dilated, external os presented a picture of puerperal laceration, eroded and everted lips. A quantity of adenoid vegetations were removed. After treatment was not given as she left the hospital in ten days but in four or five months there was hemorrhage again but only slight with a persistent discharge tinged with blood. Local treatment was then given for a year, not constantly or regularly but once in awhile when discharges became enough to worry her. Not being able to cure her entirely she was persuaded to have a second curettement, followed by intrauterine swabbing of iodine and carbolic acid and packed with iodoform gauze. This not only cured her menorrhagia but the external os resumed its natural appearance, after using hot douches for a few months together with iron tonics.

I have not spoken of septic and gonorrheal endometritis as I have confined myself more especially to virginal endometritis and in this we are not expected to find either.

I believe every gynecologist will confess that chronic endometritis is one of the most discouraging and obstinate affections to cure. It is impossible to control the patient's habits of life and her environments. I find that some women are satisfied to simply feel better than when at their worst, and will not continue faithfully the treatment, but if one is determined to get well and will put herself under the care of her physician and obey orders, her recovery as a rule is more speedy and permanent.

A REVIEW OF ONE THOUSAND OPERATIONS FOR GALLSTONE DISEASE, WITH ESPECIAL REFERENCE TO THE MORTALITY.*

BY WILLIAM J. AND CHARLES H. MAYO,
Surgeons to St. Mary's Hospital, Rochester, Minnesota.

In one thousand operations for gallstone disease there were fifty deaths (5%), counting as a death every patient operated upon who died in the hospital without regard to cause of death or length of time thereafter. Nine hundred and sixty for benign disease, with 4.2% mortality. More than one procedure through a single incision, only the major was counted, therefore 101 cholecystostomies and 44 cholecystectomies in connection with common duct operations are not included.

Cholecystostomies: 673 cases—mortality 2.4. This group includes most of the acute infections. In no case did stones reform in the gall-bladder. This is the operation of choice in the average uncomplicated case, and especially if there is or has been cholangitis.

Cholecystectomy 186—mortality 4.3% employed for special indications such as cystic duct obstruction, thick-walled gallbladders, suspicious of malignant disease and cholecystitis without calculi. One hundred and thirty-seven operations for stone in the common duct—mortality 11, 7% from operation, 4% from secondary complications after more than three weeks. Cases operated upon during quiescent period with little jaundice and slight infection, all recovered. Four cases with extreme icterus from obstruction, who had subcutaneous hemorrhage at the time of operation (purpura), all died; four cases of complete biliary obstruction in which common and hepatic ducts filled with clear cystic fluid and no bile, all died. Including malignant disease, 14.6 of total were upon common duct. Forty cases of malignant disease with 22.5% mortality, two cases with cancer of the gall-bladder now alive and well more than two years after; two additional favorable cases of more recent date. Of the remaining malignant cases a few received marked palliation, but the majority were but little benefited.

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*Abstract of paper read before the Southern Surgical and Gynecological Association, Birmingham, Ala., December 15th.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, March 6, 1905.

F. F. Lawrence, President. Chas. J. Shepard, Secretary.

Members present, thirty-five.

Dr. Chas. J. Shepard read a paper on "Falling of the Hair." Discussion by Drs. Probst and Emerick. Dr. Rutter read a paper on "Traumatic Neurosis." Discussion by Drs. W. J. Means, Kinsman, Baldwin and Carter. This interesting paper and discussion will appear in our next issue.

A communication from the executive committee in reference to requesting the street Railway company to provide lower steps on the open cars, was considered and referred back to the committee for further investigation.

The executive committee was authorized to provide for the entertainment of Dr. S. A. Knopf of New York City, who is to come here under the auspices of the educational committee of the District Nurses Association.

Dr. James M. Rector was elected to membership in the Academy.

Regular Meeting, March 20, 1905.

Members present, forty-eight.

Pathological specimens presented by Dr. Lawrence.

Dr. Howell read a paper on "Leucorrhea and Its Significance." Discussion by Drs. Wardlow and Warner. Dr. Baldwin read a paper on "Surgical Tuberculosis." Discussion by Drs. Probst, Kinsman, Hoover and Warner.

On motion Drs. Warner, Clemmer, and Dunham were appointed by the president to coöperate with a committee from the District Nurses Association in reference to devising plans for the care of tuberculous sick in the city.

On recommendation of the executive committee an invitation was extended to Dr. H. C. Wood, Jr., of Philadelphia, to deliver an address before the Academy; the executive committee being authorized to make necessary arrangements.

SENECA COUNTY MEDICAL SOCIETY.

This society will hold its next regular meeting, April 20, at which Dr. C. J. Anders will read a paper on "Ergot," and Dr. H. B. Gibbon will present a paper on "Puerperal Eclampsia," Dr. R. E. Chamberlain and Dr. W. S. Mumma to open the respective discussions.

Regular meeting of the Greene County Medical Society was held Thursday, January 5, 1905, at 10 a. m. The principal paper was by Dr. L. M. Jones, of Jamestown, on "Nuclein, Its Therapeltic Value." S. S. Wilson, President; A. C. Messenger, Secretary.

The first annual meeting of the First Councilor District of the Ohio State Medical Association was held at the Academy of Medicine rooms, Cincinnati, Ohio, December 8 and 9, 1904. Brooks F. Beebe, Councilor. The following program was carried out:

1. Chronic Catarrhal Cholecystitis—Dr. E. S. Stevens, Lebanon, Ohio. 2. Theories of Immunity—Represented diagramatically—Dr. Mark Millikin, Hamilton, Ohio. 3. Appendicitis—Dr. Joseph Eichberg. 4. Pathology of Appendicitis (with lantern demonstrations—Dr. S. P. Kramer. 5. Time for Operation for Appendicitis—Dr. Chas. A. L. Reed. 6. Modern Surgery—Dr. P. S. Conner.

Clinics were given at Medical College of Ohio, Miami Medical College, Presbyterian Hospital.

Entertainment consisted of table d'hote dinner, 5:30 p. m., at the Business Men's Club, Chamber of Commerce Building. Visiting members were invited to attend the theatre and a smoker as the guests of members of the Academy.

The Cleveland Academy of Medicine held its regular meeting March 17, 1905. The following program was presented: The Sanatorium Treatment at Home for Tuberculous Patients, Dr. S. A. Knopf, New York; Nutrition in Tuberculosis, Dr. John P. Sawyer; The Anti-Tuberculosis Movement in Cleveland, Dr. John H. Lowman; discussion by Dr. C. O. Probst, Columbus, O.

The Ophthalmological and Oto-Laryngological Section held its twelfth regular meeting March 24, 1905. The program included the following: The Nose and Its Accessory Sinuses in the American Bear, with Specimens, Dr. J. M. Ingersoll; The Use of the X-Ray and Electro-Magnet in Removing Foreign Bodies from the Eye, with Exhibition of Specimens, Photographs and Lantern Slides, by Dr. George S. Iddings, Dr. Albert R. Baker.

MEETING OF THE N. W. O. M. ASSOCIATION.

The North Western Ohio Medical Association held a most successful meeting at Tiffin, December 15-16, 1904. Papers were read by Drs. E. L. Tupper, Ottawa; D. W. Steiner, Lima; G. W. Williard, Tiffin; T. M. Gehrett, Deshler; E. H. Porter, Tiffin; C. W. Moots, Delphos; J. H. Jacobson, Toledo; E. J. Greenfield, Toledo; R. C. Longfellow, Fostoria; C. E. Beardsley, Ottawa, and W. A. Dickey, Toledo.

Among those present and taking part in the discussion, besides the essayists, were Drs. W. S. Phillips, Belle Center; C. T. Benner, Tiffin; H. L. Wenner, Tiffin; F. L. Bates, Lima; C. Lukens, Toledo; J. A. Duncan, Toledo; W. H. Gillette, Toledo; M. Stamm, Fremont, and J. C. Martin, Findlay.

In the evening a banquet was served the members and visiting physicians. This was followed by an address on "The Curse of Genius," by Dr. Dan Millikin, of Hamilton.

Election of officers resulted as follows: President, T. M. Gehrett, Deshler; First Vicepresident, F. L. Bates, Lima; Second Vicepresident, A. F. Cook, Sandusky; Secretary, A. S. Rudy, Lima; Assistant Secretary and Treasurer, W. S. Philips, Belle Center. The next meeting will be held in Fremont.

F. D. WEST.

CRAWFORD COUNTY MEDICAL SOCIETY.

The Crawford County Medical Society held its regular meeting March 16, 1905. The evening was devoted to papers and discussion on the subject of Pulmonary Tuberculosis. Besides "members of the profession there were present several ministers and school-workers interested in the prevention of this disease.

Dr. Carl L. Spohr of Columbus read a most interesting paper on 'The Cause and Prevention of Pulmonary Tuberculosis,' and Dr. C. O. Probst spoke on 'The Modern Treatment of the Same.' Then followed discussion of these papers, especially along the line of the prevention of dissemination of tubercular germs in the public schools."

Dr. C. O. Probst explained the plans which are pending before the state commission for the erection of a state sanatorium for the treatment of tubercular patients. Great interest was manifested in the subject, and physicians in that part of the state hope to see the site between Crestline and Mansfield, now under consideration, selected as the location of the proposed state hospital.

The following officers were elected for the ensuing year: Dr. E. D. Helfrich, Galion, President; Dr. C. A. Marquart, Crestline, Vicepresident; Dr. W. L. Youmans, Bucyrus, Secretary; Dr. Katherine Rayl, Galion, Treasurer; Dr. J. F. Fitzsimmons, Bucyrus, Member of Board of Censors. The delegates from the local society to the state association meeting will be chosen at the next meeting, to be held in Bycyrus on April 25.

Periscope of Medical Progress.

MEDICINE AND SURGERY.

SYMPTOMATOLOGY OF GASTRIC ULCER.

Dr. Campbell Howard (*Maryland Medical Journal*), reviews the manifestations of round ulcer as illustrated by the cases seen at the Johns Hopkins Hospital. Vomiting, pain, and hematemesis had been the cardinal symptoms, and had occurred in about the relative frequency usually reported. Pain was usually referred to the epigastrium. Its site bore no relation to the site of the ulcer, and it varied from discomfort to acute colic. It was rarely continuous, was most marked after meals, and was usually increased by pressure. In some patients it occurred independently of meals, but most often it was greatest after the ingestion of food, and the series exemplified the truth of Gerhard's maxim—"Those who refuse to eat because of pain have gastric ulcer." Vomiting was present in about 85 per cent. of the cases. It occurred at the height of digestion or just after the ingestion of food, and varied noticeably with the severity of the pain. In some cases it was provoked for the sake of relief. The blood vomited was usually bright red, but the coffee-ground vomitus was noted in two-thirds of the cases. In some cases fatal hemorrhage occurred without physical signs (hemorrhage foudroyante of the French). Blood, Dr. Howard said, would be found in the stools more often if more looked for. Nausea was usually absent. Dyspepsia, due to hyperacidity, constipation and retention of appetite, was usual. Loss of weight occurred in 54 of 82 cases, nine showing a loss of 40 pounds. Epigastric tenderness was often felt, and sometimes tenderness on pressure over the back. A mass (due to abscess, perforation, exudate or scars) was present in 20 cases of the series. Only 27 per cent. of the cases showed hyperacidity, and in nine hydrochloric acid was absent, seven of these showing the presence of lactic acid (due possibly to stagnation of food). The blood showed a chloranemia similar to that of carcinoma. Complications of Gastric Ulcer.—Fatal hemorrhage occurred in 8.5 per cent. of the cases, perforation in 3.6 per cent. Obliteration of the liver dullness without ascites was said to mean perforation. Parotitis, tetany, perigastric adhesions, and ulcers were also seen. Varieties of Gastric Ulcer.—The cases were divided into the acute and chronic types. Two classes of the former were distinguished—the primary (acute perforative) and the secondary (occurring in infectious disease, heart distase, etc.). Five classes of the chronic type were recognized—the gastralgic, characterized chiefly by pain; the catarrhal, by vomiting; the hemorrhagic, by presence of blood; the cachetic, by wasting without gastric signs, and the dyspeptic, by the latent course. Diagnosis of Gastric Ulcer.—This, said Dr. McCrae, is easy in the typical and difficult in the atypical cases. A large number of the cases are latent and cannot be diagnosed. Microscopical examination of the vomitus for blood should always be made. Similar conditions from which gastric ulcer must be differentiated are gastric neuroses (in which pain is not constant and gastric analysis negative), gallstones, gastric crisis of locomotor ataxia, and all the acute abdominal conditions. In the chronic cases the diagnosis from cancer offers most difficulty. A constant hyperchlorhydria speaks for ulcer. The Medical Treatment of Gastric Ulcer.—The case should, Dr. McCrae said, always be regarded as a possibly surgical one from the start, and nurses and attendants warned to be on the watch for dangerous symptoms. Rest in bed for four weeks or longer, absence of irritation to the stomach, and the provision of as good a blood supply as possible were said to be the principles of treatment. All food should be stopped by mouth for from four to six days. Liquid nourishment—preferably whey or peptonized milk—should then be given for 10 to 14 days. One quart should be given per day, and this should be diluted with alkalis. The diet should then be gradually increased, a soft solid diet being reacted at the end of four weeks. Atropin, large quantities of alkali, bismuth, silver nitrate, and olive oil were also said to be of use. Lavage, though not necessary as a routine, was said not to be contraindicated. The patient's diet should be carefully watched even after he recovers. In chronic cases the treatment was said to be the same, surgically interference being demanded whn doubt exists as to the presence of malignancy and when repeated hemorrhages occur. For the pain, bromides, codein, and morphia should be used. Surgical Treatment of Gastric Ulcer.—This subjeect was treated by Dr. Finney. He spoke of the interest of gastric surgery, and said that it was synonymous really with the surgery of the early and late features of gastric ulcer. It also illustrated the recent tendency of the internist and the surgeon to get together, the former realizing his limitations and he latter his possibilities. For the hemorrhage the surgeon could not do much on account of the inaccessibility of the bleeding point, and the early cases should be left to the physician. Later exploration was indicated, but little could be done beyond drainage. If hemorrhage was frequent, a jejunostomy and intestinal feeding were indicated. In perforation surgical treatment has been satisfactory when the cases have seen early. Rapid cleansing, as silght insult to tissue as possible, and closure without drain were the steps of procedure in early cases. For stenosis that operation was said to be best which disturbed relations as little as possible, and pyloroplasty was said to answer this requirement. For the remote conditions (dilation of stomach and the late train of neurotic symptoms) gastroenterostmy and pyloroplasty have proven useful. As a rule, the more found at operation the greater has been the relief the surgeon could give. Dr. Pancoast reported a case of perforating gastric ulcer who was jaundiced and showed bile in the urine. At operation a large amount of free bile was found in the peritoneal cavity.

CELLOIDIN IN SURGERY.

Dr. F. H. Wiggin (International Journal of Surgery), applies the following solution after closure of wound in operation for appendicitis:

℞ Alcohol, 96 per cent.; ether, aa 49½ ozs.; celloidin, 1 oz.; add ol. ricini, ½ oz. Misce et fiat solutio. This thoroughly seals the wound, but permits of its complete inspection, as the celloidin is transparent.

THE DIGESTION OF CASEINS AND ITS RELATION TO CERTAIN PROBLEMS IN INFANT FEEDING.

T. S. Southworth (*Medical Record*) says that the nature of casein digestion is an important feature in the management of artificially-fed infants that has not received the consideration it deserves. Hammersten's erroneous conclusions have been copied and accepted without question by so many authors that it is only very recently that it has been shown that much of the teaching of the past requires recasting. The ferment first formed in the stomach of the young is the rennet ferment, which changes casein into paracasein. At first this is digested in the intestine, but as hydrochloric acid begins to be secreted this combines with the paracasein, forming hydrochloride of casein, which is fitted for peptic digestion. The greater the amount of acid present, the tougher will be the curd; but at the same time more pepsin is secreted, so that as the infant develops the work performed by the stomach is regulated automatically. An excess of acid causes the formation of a less digestible dihydrochloride of paracasein; but if the acid is so abundant that some of it is uncombined, or free, the new substance is readily digested. The presence of lactic acid in sour milk may greatly modify the digestive processes in the infant's stomach, and this question, as well as the rationale of adding alkalies to food mixtures, is discussed in detail by the author.

A STUDY OF FIFTEEN CASES OF ERYSIPELAS TREATED BY INJECTIONS OF ANTISTREPTOCOCCIC SERUM.

J. C. Ayer (*Medical Record*, March 4, 1905), compares the results in fifteen cases of erysipelas treated by means of Marmorek's serum with those obtained in seventy-nine cases managed by the usual methods in vogue before the introduction of serum therapy. The conclusions reached are as follows: (1) That the administration of antistreptococcus serum shortens considerably the course of uncomplicated attacks of erysipelas. (2) That it tends to inhibit extension of the disease. (3) That it has a strikingly beneficial effect upon the general condition of the patient, reducing the temperature, pain and discomfort incidental to the disease. (4) That it rapidly reduces the pathological leucocytosis. (5) That it prevents or suppresses febrile albumiuria. (6) That its use is attended with no danger, even in large doses. (7) Tha the only disagreeable symptom referable to the serum observed by the writer is a transient eruption which occasionally occurs at the site of the injection. (8) That the efficacy of the serum treatment is in direct ratio to the length of time which has elapsed between the onset of the disease and the first injection of serum.

CLINICAL EXAMINATION OF THE URINE.

From an exhaustive and critical study of the commoner methods used in the clinical examination of the urine reported in the March numbers of the Journal of the American Medical Association Dr. Richard C. Abbott of Boston gives the following summary and conclusions: Although the number of cases which I have studied is not large, it is, I think, sufficient to warrant the following conclusions:

1. There are many cases of acute glomerular nephritis which cannot be recognized by any of the methods of examination known to us.

2. In some cases of subacute and chronic glomerular nephritis, our diagnostic resources are likewise at fault, but in the great majority of cases here studied, the condition of the urine taken in connection with other features of the clinical picture, enabled us to anticipate the autopsy findings. Our success in the dagnosis of chronic glomerular nephritis is almost as constant as our failure in the acute cases.

3. When we face the group of chronic interstitial cases, our diagnostic resources appear to be neither as sufficient as in chronic glomerular nephritis, nor as inadequate as they were shown to be in the acute cases.

In about one-third of the cases the diagnosis was correctly made before death.

4. Among other conditions mistaken for nephritis, owing to the implicit reliance in the urinary findings, we find that the senile and arteriosclerotic degenerations are not infrequently the cause of mistaken diagnosis of chronic nephritis, while in conditions involving passive congestion or acute degeneration of the kidney, the urine occasionally simulates that of acute nephritis. Even in cases where no lesions are to be found at autopsy, the urine is occasionally highly albuminous and full of casts.

5. In our ordinary urinary examinations, common errors are: (a) The attempt to estimate urea without any accurate knowledge of the patient's metabolism. (b) The statement that renal cells are present when all that we know is that we have seen small

mononuclear cells, perhaps belonging to the renal tubules, perhaps not.

6. Cryoscopy and other attempts to test more directly the renal permeability are not as yet capable of supplementing in clinical work the older methods of examination in the diagnosis of nephritis.

The vast majority of estimations of urinary solids, including urea, are in my opinion a waste of time, since they are not, and in most cases cannot be made, part of a general metabolism experiment.

The attempt to estimate the anatomic condition of the kidney by the measurement of albumin and the search for casts is fallacious in the extreme.

The most reliable data about the urine are those most simply and quickly obtained, the twenty-four hour quantity, the specific gravity and the color.

LARGEST UNIVERSITY IN THE WORLD.—Berlin University, according to a recent report in the *Boston Medical and Surgical Journal*, is the largest university in the world, having in attendance 9,104 students—3,572 in philosophic courses, 1,111 in medicine, 2,756 in law, 325 in theology. Among these are 123 American students.

THE COLUMBUS MEDICAL JOURNAL.

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APRIL, 1905.

Editorial.

PREVENTION OF TUBERCULOSIS.

The Instructive District Nurses association of this city is rendering valuable service by its effort to educate the public as to proper methods of preventing tubercular infection.

The recent lecture of Dr. Knopf of New York, on prevention of tuberculosis and care of tuberculous patients, was appreciated not only by the profession, but by the public in general. The lecture was well attended, there being many physicians, nurses and teachers in the audience. It was highly instructive and practical throughout. The lecturer presented the subject in a terse and most impressive manner, inculcating sane views in regard to this dread disease, and the best methods of preventing its further spread. He pointed out its infectious and communicable character and said that it was not hereditary and was one of the most curable of diseases. Taken in its early stages from seventy-five to ninety per cent. of tuberculosis cases may be cured. He pointed out in a very clear way the methods of communicating the disease, stating that promiscuous expectoration on the sidewalks, in the street cars and other public places should be rigidly controlled by ordinances. "Give your young people plenty of fresh air; find them employment that furnishes exercise and outdoor life." "In your homes," he said, "raise the windows, night air is as good as the air of day. Use plenty of covering and lots of fresh air."

"It is not necessary to go to Colorado, Florida, California or Arizona, but if you go, stay there. Don't come back, for a cure effected there may not serve for here. You may be cured here just as well, and once so cured, the chances of permanency are greatly increased."

He called attention to the fact that a poorly ventilated church was as dangerous a place as any other filled with impure air. He pointed out the duty of municipalities, governments and philanthropists in establishing hospitals for the treatment of tuberculous patients. "No other disease so generally threatens the public health and no other method of handling the scourge is so efficient as the sanatorium." He appealed in strong terms for philanthropists to turn aside for awhile from endowing colleges and building libraries and contribute to the erection of preventive hospitals. Incidentally, Dr. Knopf, in strong terms, pointed out the dangers of the use of patent medicines and quack methods of treating tuberculosis, and also appealed to the public press to bar from their pages advertisements of fraudulent preparations.

The District Nurses association has an educational committee which is doing much to enlighten the public as to the best methods of prevention and cure of this prevalent disease.

This association is thus doing a commendable work in popularizing scientific facts relating to sanitation and giving to the laity the opportunity of learning from authoritative sources important facts relating to the common diseases and the laws of health.

Another example of this "commendable tendency" is found in a series of lectures now being given by Professor W. T. Sedgwick before the Lowell Institute on "Sanitation of Cities." It is said that this discussion, so far as it appears, is a peculiarly happy statement of scientific facts in popular language.

REMOVAL OF NORMAL APPENDIX.

There seems to be some difference of opinion as to the advisability of removing the normal appendix when the abdomen is opened for other reasons. "One surgeon," says Dr. Gordon, (Brooklyn Medical Journal, November, 1904), "who believes that the appendix should always be removed when the abdomen is opened, quotes from six hundred operations, and finds twenty-seven normal appendices, and gives it as his honest opinion that a large per cent. of the small number left would have been found abnormal if the pathologist had had an opportunity to examine them, and feels like making an apology for having left twenty-seven patients out of six hundred in possession of their appendices. While a surgeon of equal ability, but not so radical, quotes from as large a number and shows from two to four per cent. of appendices in an abnormal state."

There is, no doubt, an increased risk in removing the normal appendix at the time of some other operation. "The anesthetic," as stated by this author, "must be prolonged anywhere from five to ten minutes, which is, to some patients, a decided risk; increased shock must also be taken into consideration, and search for the appendix, after removal of pus tubes or other structures that are infected, may carry infection on instruments or the hands of the operator to clean structures; also infection from the interior of the appendix may gain access to the clean peritoneum. There is, too, a slight risk that adhesion may form as a result of the added operation, and intestinal obstruction call for a secondary operation. While all of these accidents are remote, no one can reasonably claim that they are not to be considered."

The same author makes the following quotations from well-known authors in support of his claim that the normal appendix should not be removed when the adbomen has been opened for other reasons. "Dr. Baldy, in considering over 100 abdominal operations where he left the appendix, says: "In no such case have I ever had to re-operate on account of the condition of the appendix. In none have I found symptoms remaining referable to that organ, and this in spite of the fact that in not a few of them inflammatory products had invaded the underlying coats of the peritoneum." Dr. Vineberg: "My own practice is based on the principle never to remove a tissue unless its removal is indicated by disease. Whenever it is feasible in the performance of a laparotomy for other conditions than appendicitis, I search for the appendix for purposes of investigation, but do not excise it unless it shows some pathologic change." Dr. Carstens: "As far as I am able to find out, not more than one patient in a thousand that has had abdominal section is afterward affected with appendicitis. It is estimated that 2 per cent. of the population have appendicitis. If you operate on one hundred and remove all those appendices, of which only one or two would ever have appendicitis, I know that you will kill at least one or two, and I don't think that is good practice. I have been doing abdominal sections for many years and have only seen two cases that afterwards were affected with appendicitis, and I have had several thousand." Dr. Robert T. Morris opposes the removal of the normal appendix on three points: "I. Removal of the appendix delays the operation. 2. Adds a little to the danger. 3. And if the idea is taught by competent men, it will be carried out by those who will manage to get a death rate out of it. Leave the appendix alone until it is infected and then lose no time in having it inspected. If we are to get the lowest possible death rate in any sort of surgical work, we must let the patient off with the least attack of surgery that is possible." Dr. Kelly, in two hundred operations for other conditions, only found it necessary to remove the appendix twenty-five times. He says: "My reasons for not removing the normal appendix are as follows: Its removal involves a slight additional risk, owing to the fact that, no matter how good the patient's condition may be at the time the appendix is removed, there is no guarantee that it will remain so until the end of the operation, and should a condition of shock ensue, the additional five minutes consumed in the removal of the appendix will lessen the chances of recovery." In 1902 Dr. Kelly wrote to eighty well-known surgeons in different parts of the United States as follows: "When the abdomen is opened for other causes, and the perfectly normal appendix is easily accessible, is it your rule to remove it?" To the eighty inquiries, seventy-four answers were received, of which twenty-six answered "yes," and forty-four "no."

COUNCIL ON PHARMACY AND CHEMISTRY.

We note with pleasure that the Board of Trustees of the American Medical Association has created an Advisory Board to be known as the Council on Pharamacy and Chemistry of the American Medical Association. It is the purpose of the Council to examine into the composition and status of the various medicinal preparations that are offered to physicians, and which are not included in the United States Pharmacopeia, or in other standard text-books or formularies. These preparations will include the synthetic chemical compounds, as well as the so-called proprietaries and pharmaceutical specialties put out under trademarked names. Preparations which conform to the standard established by the ten rules governing the matter, will be incorporated in "New and Non-Official Remedies," a book to be published by The Journal of the American Medical Association.

"The plan for the work is briefly as follows: All available information regarding a product will be secured from the manufacturer and from other sources. This information, together with specimens of the article, will be submitted to a committee of experts, who will examine critically into the product, consider the claims made for it, and make a report. On the basis of this report, the Council will accept, reject, or hold for further consideration. If accepted, the information will be condensed and arranged somewhat on the plan of the United States Pharmacopeia, but with the addition of brief pharmacologic and therapeutic data. The Council believes that there are many articles, at present not recognized by the Pharmacopeia, which comply with the required standard and do not need any further investigation. In this class come many of the synthetics as well as many well-known pharmaceutical specialties. These are now being written up and it is proposed to issue the first edition of the book as soon as possible. No charge will be made for representation in the book.

The following rules will govern the admission of articles:

No article will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article, be furnished for publication. (Sufficient information should be supplied to permit the Council to verify the statements made regarding the article, and to determine its status from time to time. No chemical compound will be admitted unless information be furnished regarding tests for identity, purity and strength, and, if a synthetic compound, the rational formula. No article that is advertised to the public will be admitted; but this rule will not apply to disinfectants, cosmetics, foods and mineral waters, except when advertised in an objectionable manner. No article will be admitted whose label, package or circular accompanying the package contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated. (This rule does not apply to vaccines and antitoxins nor to advertising in medical journals, nor to literature distributed solely to physicians. No article will be admitted or retained about which the manufacturer, or his agents, make false or misleading statements regarding the country of origin, raw material from which made, method of collection or preparation. No article will be admitted or retained about whose therapeutic value the manufacturer, or his agents, make unwarranted, exaggerated, or misleading statements. Labels on articles containing "heroic" or "poisonous" substances should show the amounts of each of such ingredients in a given quantity of the product. Every article should have a name or title indicative of its chemical composition or pharmaceutic character, in addition to its trade name, when such trade name is not sufficiently descriptive. If the name of an article is registered, or the label copyrighted, the date of registration should be furnished the Council. If the article is patented—either process or product—the number and date of such patent or patents should be furnished. If patented in other countries, the name of each country in which patent is held should be supplied, together with the name under which the article is there registered.

The work of this Council will be of great advantage to physicians and to editors of other journals, for as stated by the Council, the physician not only has the right to know, but it is his duty to know, the composition of medicines he prescribes for his patients. He may not be interested in the details of the method or of the process of manufacture of an article, but he should know what medicinal agents it contains, and the amounts represented in a given quantity of the article."

The Council consists of men of the highest standing and the results of their work will be a great gain to the medical profession. The members of the Council are: Arthur R. Cushny, Ann Arbor; C. Lewis Diehl, Louisville; C. S. N. Hallberg, Chicago; Robert A. Hatcher, New York; L. F. Kebler, Washington; J. H. Long, Chicago; F. G. Novy, Ann Arbor; W. A. Puckner, Chicago; Samuel P. Sadtler, Philadelphia; J. O. Schlotterbeck, Ann Arbor; Geo. H. Simmons, Chicago; Torald Sollmann, Cleveland; Julius Stieglitz, Chicago; M. I. Wilbert, Philadelphia; H. W. Wiley, Washington.

STATE MEDICAL ASSOCIATION.

The next meeting of the State Medical Association which is to be held in this city May 10-11-12 promises to be one of the most successful in the history of the state organization. The membership is now larger than ever before and is drawn from every part of the state. With the very general organization of county societies the state will be better represented in the house of delegates than ever before. Thanks to the efficient Council, organization has been the watchword for the last two years. Harmony and an active interest in scientific medicine prevails.

Arrangements are well under way for entertaining and otherwise caring for the visiting members of the Association. The general sessions and the meetings of the section on Medicine will be held in the Y. M. C. A. building east of Capitol square. Exhibits will be made in this building. The Surgical section will meet in the Board of Trade auditorium. It is announced that Dr. J. B. Roberts of Philadelphia has been secured to deliver the oration on Surgery. The banquet will be served at the Great Southern hotel.

Our next issue will contain the program and other items of interest connected with the meeting; and will also be provided with a frontispiece illustration of the President of the Association, Dr. S. S. Halderman, of Portsmouth.

ORIGIN OF THE UNIVERSITY OF PENNSYLVANIA.

The foundation of the University of Pennsylvania has generally been regarded as the College of Philadelphia which was founded in 1749, but there seem to be good reasons for tracing it to an educational movement nine years earlier than the above date. Dr. C. W. Dulles, Lecturer on the History of Medicine in the University of Pennsylvania, has an interesting paper on this subject recently published in the Medical Bulletin of that University, in which he traces the origin of the University to the Charity School of 1740.

The Charity School was founded by a number of persons, unbiased by sectarian feeling, who had been brought together as a result of the work of Rev. George Whitefield, who thought the time opportune to unite in an effort to supply at once the lack of educational facilities for the poor and a place for preaching to numbers too large to be accommodated in any of the church buildings in the town. The first building was completed and legally transferred to representatives of the subscribers September 15, 1740, and was used for public services three weeks later. It was declared "that the house is intended for public worship and a charity school." Benjamin Franklin was one of the trustees of this Charity School and as prime mover in an effort to provide better educational facilities for youth in Pennsylvania effected an organization looking to the founding of an academy. Through his influence the trustees of the Charity School presented to the trustees of a proposed academy a proposition for the transfer of the property of the Charity School to the trustees of the Academy. This proposition was accepted and the united enterprise was known as the Academy and Charity School, and it is said that it advanced rapidly in public favor. The next change came when the Academy and Charity School became, a few years later, the University of Pennsylvania.

Judge S. W. Pennypacker, now Governor of Pennsylvania, has presented, before the Committee of the University of Pennsylvania, a "brief" of an argument to show that the date of the foundation of the University was 1740. In this argument it is stated that the origin of an institution is to be found in that movement " 'which being continued constitutes an essential part of the organization.' It then proceeds to show that the movement set on foot in 1740 to establish a charity school in Philadelphia, being taken up and carried to completion by the projectors of the Academy, which in turn developed into the University of Pennsylvania, is the oldest integral part of the University," the latter "therefore dating from the year when this part was fairly inaugurated."

Chiefly through the efforts of Dr. John Morgan the Medical Department of the University, the first medical school in America, was established, 1765.

OHIO SOCIETY OF U. S. PENSION EXAMINING SURGEONS.

The Ohio Society of United States Pension Examining Surgeons will meet on Thursday May 11, at 1 o'clock, at the Neil House, in this city. The program will include several papers on subjects of general interest to examining surgeons. Drs. Frank Warner of Columbus, P. J. Kline of Portsmouth, and G. A. Ehret of Cleveland will be among those to present papers.

An invitation has been extended to Dr. Samuel Houston, Medical Referee of the Bureau of Pensions, Washington, D. C., to be present. It is hoped that most of the pension boards in the state will be represented at this meeting.

For information, address Dr. O. C. Andre of Waverly, Secretary. The local committee of arrangements consists of Drs. Lafayette Woodruff and Frank Warner of Columbus, and A. T. Quinn of Wilmington. Drs. J. S. Hedges, Mansfield; S. B. Lightner, Sabina, and J. U. Barnhill, Columbus, committee on constitution and by-laws, will report at this meeting. The committee on program consists of Drs. O. C. Andre, Waverly; C. D. Mills, Marysville, and E. R. Baker, Dayton.

Obituary.

TIMOTHY MELVILLE LIPPITT, M. D.

Dr. T. Melville Lippitt of this city, son of Dr. B. F. Lippitt, was born in Mt. Vernon, Ohio, December 24, 1872, and died February 10, 1905, from "laryngeal stenosis."

Dr. Lippitt was educated in the public schools of Mt. Vernon and Columbus. After working three years on the Press-Post he began the study of medicine with his father, and was graduated from Starling Medical College in the class of 1897. For three years he practiced general medicine in this city. He then took a post-graduate course in New York City, graduating from the Polyclinic and Post-Graduate School of Medicine. Subsequently he limited his practice to the treatment of venereal and skin diseases.

Dr. Lippitt was well-known in this city and enjoyed a large circle of acquaintances and friends.

GEORGE KINSMAN RODEBAUGH, M. D.

Dr. George K. Rodebaugh of this city, son of Dr. Henry A. Rodebaugh of the Park View Sanitarium, was born in Reynoldsburg, March 4, 1877, and died in this city February 6, 1905, of "Bright's disease."

His father moving to Marysville, he was educated in the public schools of that city, subsequently attending the Ohio State University. Later he took up the study of medicine, attending Starling Medical College one year and Jefferson Medical College of Philadelphia three years, graduating from the latter in 1901. He after wards took a post-graduate course at the Philadelphia Polyclinic.

Dr. George K. Rodebaugh was associated with his father in the active practice of his profession, first at Marysville, and then as physician to the Park View Sanitarium, since that institution was established in Columbus a few years ago. He was engaged in the latter capacity and as secretary of the Ohio Sanitarium Company at the time of his death.

For two years he was assistant to Dr. D. N. Kinsman, Professor of the Principles and Practice of Medicine at the Ohio Medical University, devoting especial attention to diseases of the nervous system. He had the manuscript of a work for nurses on Mental and Nervous Diseases prepared for publication.

Dr. Rodebaugh was a member of the Sigma Alpha Epsilon college fraternity, and a thirty-second degree Mason, the Masonic order conducting the funeral services.

FRANK M. GELHARD, M. D.

Dr. Frank M. Gelhard, house physician at the Ohio Institution for Feeble Minded Youth, died March 21st of this year. Dr. Gelhard had served faithfully as physician at the institution for the past twenty-two years. He was born in Germany and was a graduate of Heidelberg University, coming to Columbus at the age of thirty. He was, at the time of his death, fifty-nine years of age. His death was attributed to "exhaustion and heart failure."

GUSTAVUS A. DOREN, M. D.

Dr. Gustavus A. Doren, one of the founders, and for forty-six years superintendent of the Ohio Institution for Feeble Minded Youth, after a protracted illness, died Thursday, March 23, from "mitral insufficiency due to la grippe. Dr. Doren was born at Athens, Tennessee, May 25, 1838. When about ten years of age his parents came to Ohio, locating at Xenia. He received his general education in the public schools of Xenia and Columbus. He studied medicine under Dr. R. J. Patterson and was graduated at Berkshire Medical College(Medical Department of Williams College), Pittsfield, Massachusetts. Returning to Columbus he found his preceptor, Dr. Patterson, in charge of the Ohio Institution for Feeble Minded Youth, and was, in November of that year, elected assistant superintendent of the same institution. In the winter of the following year, on the resignation of Dr. Patterson, who had been called to take charge of the Iowa Hospital for Insane, Dr. Doren was appointed superintendent for one year; at the end of which time he was re-elected and served the state continuously in this capacity to the time of his death.

Dr. Doren devoted much time to the problems of educating the imbecile youth, and has, for a number of years, been regarded as an authority on this subject. One of the principal papers he wrote was "Our Defective Classes," which was read before a meeting of the National Association of State Boards of Charities. It has been given exceptionally wide circulation. His reputation has extended beyond America, and through his energies many needed improvements have been made in the methods of teaching, and betterment of the condition of the inmates of such institutions. We note the following from a local paper.

"The establishment of such an institution in Ohio was first suggested and urged at a meeting of the Ohio Lunatic asylum.

"In 1854 Dr. Norton S. Townshend, a member of the Ohio senate ,who had become greatly interested in the subject which had been agitated in the legislature during the interim of 10 years between 1844 and 1854, went to Governor Medill and asked him whether he was going to recommend in his message to the general assembly the establishing of such an institution.

"Dr. Townshend told the governor what had been done in France and in some of the states in this country. Governor Medill took the manuscript of his message from a drawer of his desk and inserted a paragraph recommending that such action be taken by the legislature.

"The legislature took the initial steps and in 1857 the home was established on East Friend, now Main, street, opposite where the State Institution for the Blind now stands. In August of that year the first pupil was received. In the ensuing November the number had increased to 16." The institution was removed to West Broad street in 1868, when the legislature had provided a tract of 138 acres, to which 57½ acres were added later.

In 1861, Dr. Doren married Miss Hutchinson, of Syracuse, New York, who had been, for a year, a teacher in the institution. He is survived by his widow and two children, Mrs. O. J. Mitchell and Miss Jane Doren.

Medical News Notes.

The Ohio State Medical Association meets in this city May 10-11-12.

Dr. Abraham L. Burson of Irwin, Ohio, made a professional visit to the city May 17.

Dr. H. B. Blystone has removed his office from 697 North High street to 755 North High.

Dr. William Porterfield, late of McConnellsville, Ohio, has located at 2113 North High street.

Dr. J. J. Gordon, of Mount Vernon avenue, has moved his office and residence to 857 Dennison avenue.

Dr. Rose E. Timms, O. M. U. '05, was recently appointed assistant physician to the Toledo State hospital.

Dr. M. H. Cherrington of Logan, Ohio, and Dr. J. H. Duncan of Killbuck, Ohio, were calling on friends and acquaintances in the city last week.

Dr. D. V. Burkett and Miss Sarah Jane Miller of Bryden Road were married Wednesday evening, March 29. They will make their home on Franklin avenue.

Dr. T. L. Chadbourne, upon severing his connection with the Ohio Hospital for Epileptics at Gallipolis located at Vincent, Iowa, and is engaged in general practice.

Dr. William H. Pritchard, assistant physician to the Ohio Hospital for Epileptics, has been elected superintendent of the same institution, vice Dr. A. P. Ohlmacher, resigned.

Dr. H. C. Wood, Jr., of Philadelphia, will deliver an address before the Columbus Academy of Medicine, April 17, 1905, on "Proprietary Therapeutics." The address will be followed by a banquet at the Hotel Hartman.

The Ohio State Board of Health has invited Health Officers of all Ohio cities, not having home facilities, to make use of the state laboratories for the diagnosis of tuberculosis, diphtheria, and typhoid.

Dr. Mary L. Austin, O. M. U. '05, one of the house physicians at the Protestant hospital since her graduation, has just been appointed assistant physician to the Ohio Hospital for Epileptics at Gallipolis.

MEETING OF TEXAS STATE BOARD OF MEDICAL EXAMINERS. —The Board of Medical Examiners for the State of Texas will hold its next meeting in Austin, Texas, May 2, 3, 4 and 5, 1905, for the examination of applicants. J. T. Wilson, President, Sherman, Texas; M. M. Smith, Secretary, Austin, Texas.

Dr. Henry Waldo Coe, editor "Medical Sentinal," Portland, Oregon, made a brief call upon his friends in Columbus last week. The doctor reports that they are making extensive arrangements for the coming meeting of the American Medical Association at Portland, and anticipate a large attendance.

The last Bulletin of the Ohio Hospital for Epileptics (No. 1, Vol. 2) contains ten articles prepared by former Superintendent Dr. A. P. Ohlmacher and the assistant physicians, Drs. H. S. Allen, W. C. Gill, T. L. Chadbourne, W. H. Buhlig and W. H. Pritchard. Most of these papers represent work done in the pathologic laboratory of the hospital.

THIRD COUNCILOR DISTRICT MEETING.—The first annual meeting of the physicians of the Third Councilor District of the Ohio Medical Association was held February 16. The Third Councilor District is composed of the counties of Hardin, Marion, Logan, Seneca, Wyandot, Hancock, Allen, Van Wert and Auglaize, and is presided over by District Councilor F. D. Bain, of Kenton.

The fifty-eighth annual commencement exercises of Starling Medical College will be held Thursday, May 4, at the Great Southern theatre. The principal address will be delivered by Chas. J. Dabney, LL. D., president of the University of Cincinnati. The Alumni Association of the college will meet on the afternoon of commencement day, in the lower lecture room of the main building.

The Ohio State Pediatric Society will meet at the Great Southern hotel in this city May 9 and 10, under the presidency of Dr. J. V. Kofron, of Cleveland; William Clark, secretary. An annual banquet will be served on the evening of the 9th, at the Great Southern hotel, to members of the association. Dr. J. M. Dunham, of this city, is chairman of the local committee of arrangements for the meeting of the society.

The annual commencement exercises of the Ohio Medical University will be held Wednesday evening, May 3, at the Board of Trade auditorium. Rev. Emory W. Hunt, president of Denison College, will give the principal address and Dr. J. W. Wright will deliver the address on behalf of the faculty.

The Alumni Association of the university will meet at 2 o'clock on commencement day at the Assembly hall. Following the program a luncheon will be served to alumni and their friends.

Columbus mortality report for the month of February: Pneumonia, 35; tuberculosis, 26; organic diseases of the heart, 21; typhoid fever, 19; Bright's disease, 9; cerebral congestion and hemorrhage, 6; menigitis, 5; senile debility, 5; grippe 4; convulsions of children, 4; lack of care, 4; cancer, 10; paralysis, 3; asthma, 3; diseases of the liver, 3; diphtheria and croup, 2; diabetes, 2; diseases of the nervous system, 2; angina pectoris, 2; hernias, 2; cerebral softening, 2; deaths from other causes, one each, 24; total, 193.

Recent Medical Books.

A HAND-BOOK OF SURGERY. For students and practitioners. By Frederic R. Griffith, M. D., Surgeon to the Bellevue Dispensary, New York City; Assistant Surgeon at the New York Polyclinic School and Hospital. 12mo volume of 579 pages, containing 417 illustrations. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Flexible leather, $2.00 net.

Dr. Griffith has given us a little work of great merit. It is a brief outline of the principles and practice of surgery, written as concisely as is possible with clearness. We are sure it will be valuable alike to the student and the practitioner, because the entire subject of surgery is covered, including all the specialties, as Diseases of the Eye, Ear, Nose and Throat; Genito-Urinary Diseases; Diseases of Women, etc. There are also articles on Life Insurance, Rape, Sexual Perversions, Microscopy, and on many other subjects of great importance to the practising surgeon. There are 417 illustrations, selected for their clearness, accuracy, and general usefulness. We predict that Dr. Griffith's work will be to surgery what Dr. Steven's manual is to medicine. and take pleasure in recommending it to the profession.

HOW TO STUDY LITERATURE. A guide to the intensive study of literary masterpieces by Benjamin A. Heydrick, A. A., (Harv.), Professor of English Literature, State Normal School, Millersburg, Pa. Third edition, revised and enlarged. Hinds, Noble & Eldredge, publishers, 31-33-35 West 15th street, New York City.

This little book is a guide to the study of literary productions. Taking up poetry first, an outline is given, in the form of questions, which will lead the student to comprehend the subject matter, to analyze the structure, to study the characters, the descriptions, thought, the mood, the style, and the metre—of such a work for example as Tennyson's "Princess" or Coleridge's "Ancient Mariner," and suggestions for comparative study and collateral reading. In a similar way the drama, the essay, the oration and the novel are taken up, and questions given which will lead to a full comprehension of the work studied.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Issued monthly. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post Graduate Medical School. Volume 11, General Surgery, edited by John B. Murphy, M. D., Professor of Surgery, Northwestern University Medical School. November, 1903. Chicago, The Year Book Publishers, 40 Dearborn street.

This volume is unusually well illustrated and contains a brief description of all the important dissections, operations, and new methods of treatment brought forward in the literature of the year. The articles on Anesthesia, Operative Technique, Wound Healing, Tumors, Acute Infections, Diseases of the Thorax, Stomach and Intestines, are all luminous and exhaustive.

PRACTICAL PEDIATRICS. A Manual of the Medical and Surgical Diseases of Infancy and Childhood. By Dr. E. Graetzer, Editor of the "Centralblatt Fur Kinderheilkunde" and the "Excerpta Medica." Authorized translation, with numerous Additions and Notes, by Herman B. Sheffield, M. D., Instructor in Diseases of Children, and Attending Pediatrist (O.P.D), New York Post-Graduate Medical School and Hospital; Visiting Pediatrist to the Metropolitan Hospital and Dispensary, etc. Pages XII-544. Crown octavo. Flexible cloth, round corners. Price, $3.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The author has rightfully avoided the introduction of superfluous material, such as elaborate descriptions or illustrations of baby nursing bottles, family scales, silver baby spoons, classical curves, etc. He has laid especial emphasis in describing diseases of childhood upon the numerous deviations from the types which so often baffle the skill of the general practitioner.

He adds many practical suggestions; among them are sections on Intubation, Lorenz's operation for dislocation of hip, Broncho-pneumonia, Achondroplasia, Home Modification of Milk, Gonorrheal Ophthalmia, Tinea tonsurans, and several of the newer standard remedies.

There is to my knowledge no book on Pediatrics which presents in so small a space such an abundance of practical and clinical material, pathological and bacteriological data and details of etiology and diagnosis as the volume in question.

REGIONAL MINOR SURGERY. By George Gray Van Schaick, Consulting Surgeon to French Hospital, N. Y. Second edition, enlarged and revised; 228 pages, bound in cloth, profusely illustrated. Price, $1.50. International Journal of Surgery Co., N. Y.

The author's object, as stated in preface, to furnish the general practitioner with such practical information on Minor Surgical Conditions as will be of the greatest service to him in his daily practice, has been well accomplished. Subjects of a technical character have been avoided, and only the most applicable methods demonstrated by twenty years' private and hospital experience are presented. The book is liberally illustrated with original sketches and is so eminently practical and useful, we believe it will run through many more editions.

S. S. HALDERMAN, M. D.
PORTSMOUTH, OHIO
President of the Ohio State Medical Association, 1905

THE COLUMBUS MEDICAL JOURNAL.

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TRAUMATIC NEUROSIS.*

BY H. C. RUTTER, M. D., COLUMBUS, O.,

Formerly Superintendent of the Ohio Hospital for Epileptics.

Traumatic neurosis is the *bete noir* of all common carriers, and has been described under a number of different names.

From having resulted so often by reason of railway accidents, it was known as the railway spine, railroad shock; and having been described fully by Erichson, it took his name sometimes and was known as Erichson railway spine; it is also recognized as nervous shock, physical shock, neurasthenia following shock and accident; and also as accident neurosis, etc.

It is protean in its manifestations and so mixed up with purely psychic symptoms, that it has frequently puzzled the most acute diagnosticians, and bothered courts and juries to an unlimited extent. The records of the courts of Franklin county contain numerous cases of this description, and the trials of these cases have given rise to a greater divergence in medical testimony than all other cases combined. It may be divided into two classes; the first having an apparent somatic basis, and the latter appearing purely psychic as far as a physical examination can reveal a lesion.

Of the first class I shall have but little to say in this paper, but confine myself to what is known as hysterical traumatic neurosis, or an hysterical condition presenting all of the subjective symptoms of traumatic neurosis without any of the physical signs, or at best, very few.

There can be no doubt but that physical injuries have occurred in all cases, but so far they have eluded observation, and can only be judged by subjective symptoms. Nor can this be considered very remarkable when we reflect that long continued chronic mania, for instance, mania in which the healthy operations of the mind have been destroyed for years, does not leave, in many cases, the slightest change in brain structure observable to the pathologist.

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* Read before the Columbus Academy of Medicine, March 6, 1905.

In order to get a true conception of this disease or condition, it will be necessary to say a word in reference to hysteria. How shall we define that word? To properly do so would consume much more time than is allotted me in this paper, especially if we dealt with its causes, manifold manifestations and relationship to other diseases. I shall, therefore, be content to define it as a condition of the nervous system in which an innumerable variety of manifestations both mental and physical, direct and reflex, present themselves in various forms, and often in most contradictory sequences, and frequently without any appreciable pathologic bases, and most frequently without any serious danger to life.

This condition constitutes a disease of the nervous system, whether a pathologic basis is found or not. And like all other diseases, whether somatic, or apparently psychic, is not under the control of the will and can not be altered by any voluntary act of the patient. This fact must not be lost sight of, and because a shock or sudden fright, or clever ruse is sometimes sufficient to relieve many purely psychic attacks of hysteria, affords no reason for saying that the whole disease is assumed and therefore voluntary. Or, that when contradictory answers are sometimes given during an examination, and hyperesthetic and anesthetic zones suddenly and unaccounably change, that therefore the patient is a base malingerer and that no disease is present.

The condition follows accidents more or less severe, occasionally so slight as to leave no physical evidence, that is to say no injury which can be demonstrated by physical examination. Because a certain number of persons thus affected have figured in damage suits against railroad and other corporations and business firms, a disposition to regard the condition with suspicion has been engendered; and because no somatic or physical foundation is always discoverable, doubts arise as to the honesty of the patients' statements. The fact that innumerable sufferers from this condition have never brought action against anyone, and have sustained great losses and much inconvenience and distress because of the diseases, is too often overlooked, and attention directed entirely to the cases brought into public notice by the damage suits. Oppenheim has said the disease is known all over the world, and throughout many parts of the world where damage suits are unknown, even among peoples where railroads have not yet made their appearance, and where no motive to deceive could possibly exist. With cases presenting unmistakable evidence of injury, we will not concern ourselves in this essay. But the same symptoms complex are present in cases which present no physical evidence of injury, as in those in which the injury is clearly apparent. We are often consulted by patients who have been present in railway or other accidents, and in whom a physical examination fails to reveal any injury; in fact where all the symptoms appear to denote a purely psychic disturbance. In such cases we are not warranted in assuming that the patient has sustained no injury, or that the symptoms are merely assumed or imagined. I have seen many cases in which the losses resulting from inability to work, and the suffering caused by various pains, together with great nervous irritability far exceeded the same conditions arising from fractured limbs or other apparent injuries. And yet if a limb be broken, or a joint dislocated, the corporation responsible never thinks of contesting a claim for reasonable damages, while they persistently refuse to recognize a far more serious condition because it is not susceptible of absolute demonstration as that afforded by the X-ray, for instance.

And this view is too often encouraged by physicians who testify that the condition is nothing but "hysteria," implying thereby that it is self-imposed, or at least under the control of the will. Nothing can be more unjust to a claimant, or more erroneous as a statement of fact.

Traumatic neurosis has been abundantly recognized by the courts, but when coupled with the word "hysteria," is more likely to be regarded as a condition which the patient can cure by an application of the will power alone, and therefore a condition for which the patient is in a large degree responsible. Indeed the term, as usually applied, casts obloquy upon the patient, and is sneeringly and sometimes contumaciously used. A justification of this opinion is sought in the pointing out of sudden recoveries, some of which have followed fast upon the heels of a verdict, or upon the withdrawal of benefits if a member of benevolent organizations. While this may be occasionally true, whether the patient is or is not simulating a disease, it is equally true that a very large number do not recover when every incentive favors such a course. These exceptions only prove the rule, as the following case will in part demonstrate; a case which I regard as a typical case of traumatic neurosis without distinctive physical signs of disease. The case was referred to me through the kindness of Dr. Hamblin.

Mrs. V., aet. 40; married; occupation, masseuse; was a strong active woman, full of life and self-assurance; of a cheerful, jolly disposition; never moody or irritable; never complained of pain anywhere; always had perfect health and laughed at trouble. She met with an accident on the street cars July 19, 1903. The apparent injuries she received were comparatively slight, so far as a physical examination revealed them, and a careful physical examination was made by very competent surgeons.

I saw her two months later. She was then very irritable and "nervous," easily excited and startled, feared everything; and had lost fifteen pounds in weight; complained of pains distributed at different times over the entire body; frequent headache, sometimes frontal, sometimes occipital, sometimes on the right side, sometimes on the left; frequent intercostal pains, pains of a lightning character in both feet and legs, pains referred first to one thigh and then the other or both; general hyperesthesia, both of the skin and deeper tissues; great weakness of the legs, so that she was obliged to use a cane to assist in walking; tremor of hands and feet; reflexes all exaggerated and over-excited; tinnitus; dizziness; insomnia; flashes of heat followed by cold and chills; burning in palms of hands and feet, and on top of head; difficulty in swallowing; globus hysteria; hypersensibility of the skin as shown by flinching and drawing away at the lightest touch which was observed by her. She was timid and afraid to attempt going out unattended; was afraid to get off and on the cars, and easily frightened by the most trivial circumstances; she sustained noticeable loss of memory and was exceedingly absent minded; was cross and fretful about her home, her disposition having completely changed since the accident. A physical examination revealed but scant evidences of disease. Heart irritability was increased, the pulse being uniformly over one hundred; the visual field as measured by the perimeter showed a concentric contraction which was confined to the smallest circle, exciting the strongest suspicion of an attempt to deceive, but I was fully satisfied that it was due entirely to a depraved psychic estimate of the objects presented for inspection. She certainly had a much wider field of vision but her perturbed mental state made it impossible for her to tell when the objects came into her visual field. All the reflexes were exaggerated. There were no anesthetic areas; no paresthesias, excepting only the apparent hyperesthesia everywhere present. The psychic conditions present rendered the use of the dynamometer and aesthesiomometer useless. She could not, apparently, move the dynamometer index a single point, and yet her grip when not noticed was fairly good. The electrical reactions were all normal and aside from the tenderness over cervical portion of spinal column, together with the rapid pulse, there was no evidence of injury apparent.

Acting largely upon my advice this woman settled with the street railway company for a very small amount, and, according to all known rules of procedure from the defendant's point of view, should have shown a rapid recovery. But although more than a year has passed since the settlement, and she can not hope to get any further assistance from the company, she persistently refuses to get well, and continues to drag out a most miserable existence, her condition growing more distressing each day.

Pain is the most constant symptom of traumatic neurosis, and is not uniform as to character, position or duration. It may be felt in any part of the body, and is of infinite variety. Headaches are usually present and may affect any part of the head, or all parts. Sometimes the headaches are associated with vertigo. Hyperesthesia is commonly present and is usually limited to small areas; is mostly incomplete and affects the skin and deeper tissues. The plantar hyperesthesias are very significant of hysterical neurosis. These hyperesthetic areas are often identical with the hysterogenic zones, though not always so.

The zones are found in all parts of the body, but are particularly prominent in the ovarian regions. The ovarian zones are somewhat higher than the ovary, and are found in the same position in men as in women.

The backache is usually combined with hyperesthesia of the skin over the spinous processes, and is more severe than that associated with spinal disease. Its psychic character is easily recognized by the fact that when the attention of the patient is distracted, it does not appear.

The special senses are also hypersensitive. This is shown by the icreased ability to recognize faces, and by idiosyncrasies of taste and smell. Oppenheim says the importance of anesthesia as a diagnostic symptom of hysterical neurosis is very great. It is characterized, first, by its manner of extension; second, by its close connection with disturbances of the organs of sense, and in its psychic nature and its reaction to external influences. It does not as a rule follow the distribution of any particular nerves, but appears at random in any part of the body. Sometimes it affects the hand, or arm and hand, or feet or leg; like a glove or stocking, being limited to certain parts of the body regardless of nerve distribution. Hemianesthesia is a favorite form. It is not infrequently limited to the head, the line of demarkation being abrupt, but without regard to nerve distribution. Not seldom also are the special senses, or one of them at least, simultaneously affected, when no connection between the two can be explained by the nerve tracts.

Concentric contraction of the visual field is of importance, not only as furnishing a valuable indication of the character of the disease, but also by assisting in eliminating impostures, since it would seem impossible to simulate it, and therefore when found present, as proved by the perimeter, it affords almost unmistakable evidence of the sincerity of the patient's claims for disability. Various forms of motor disturbance have been noted, as well as trophic changes, both in musculature, the skin and other tissues. Paralysis, sometimes local, sometimes general, occurring either in the form of hemiplegia or paraplegia, is frequently present; sometimes absolute, sometimes partial. Pseudo muscular contractures which yield readily under chloroform narcosis are not infrenqent, as well as vaso-motor disturbances of the skin which sometimes assume the form of urticaria. In many cases the hair turns gray prematurely, while in other cases there is marked alopecia, the baldness coming on with astonishing rapidity. It must be noted that the word psychic, used so frequently in this paper, it not intended to refer to any intellectual disorder, but rather to a condition, or defect in the character and in emotional disturbances closely correlated to physical symptoms.

We find, also, excessive irritability, manifestations of irritation of mind out of all proportion to the apparent provocation, or without provocation of any kind whatever, rapid variations of emotional states, loss of will power over emotional states, and also certain acts. The mental power is not weakened, but on the contrary is frequently sharpened. There is more or less exaggerated tendency to fear. The patient not naturally timid, becomes the victim of undefined dread, not only of imaginary dangers, but of the everyday, ordinary dangers of life. For example, if driving they become afraid of the horse; afraid of all sorts of accidents which never caused them a moment's thought before; they dread runaways, etc., and are miserable during all the time the drive lasts.

The disease has considerable medico-legal importance, as the physician has frequently to assist in the administration of justice, and must be on his guard to prevent the extortion of money by imposters, as well as to safeguard the interests of those who actually suffer from the effects of this most distressing malady. While the symptoms complex renders the disease easy of recognition by the physician, it is often a most difficult matter to get an opinion before a jury, in contested cases. The declarations of the patients are inadmissable, on the ground that they are "self-serving," and although it would be well nigh impossible for a patient to group together a set of symptoms so as to form a picture of a recondite disease such as the one under consideration, the medical witness is held to the objective symptoms only, and in many cases these are either wanting or so elusive as not to be capable of development by any instrument of precision we know of at present. It belongs to a group of nervous diseases which present subjective symptoms only, such as can not be measured by any known instruments. If, however, we find a rapid pulse, a contracted visual field, exaggerated reflexes, joined to the symptoms herein detailed, the diagnosis may be regarded as certain and the only question will be as to the permanency of the trouble.

As a rule the longer the symptoms have lasted the more likely the trouble is to be permanent, although even chronic cases have been known to make good recoveries under favorable circumstances. In cases where nutritional changes have occurred, the probabilities for recovery are not so good. The same may be said in regard to motor paralysis.

DISCUSSION.

Dr. William J. Means: The subject of this paper is certainly of great interest, not only to physicians and surgeons, but to communities at large. To deny the existence of traumatic neurosis would be to deny the clinical manifestations as noted by the profession generally and correlated by a number of eminent writers. I was pleased to note that the writer of this paper confined his remarks mainly to that type where there is no visible injury and presumably no visible pathological conditions, therefore purely a functional neurosis. It is of unusual interest and importance to us to determine the true character of such nervous phenomena. I do not want to be unfair to this class of sufferers in my conclusions, but it occurs to me that justice to the sufferer as well as to corporations, demands a careful analysis of the phenomenæ as to their etiology and termination. I have had a pretty wide experience with injuries of all kinds, such as railroad injuries, street car casualties, those from manufacturing establishments and from other sources, and have made careful records of such cases and have noted the following facts:

Out of about 1000 injured employes coming under my care from one of our large manufactories in the last five years, only one developed a traumatic neurosis, and that was from an alleged electric shock. This man was of low intellectual development and through designing friends and encouragement from a physician, developed a decided traumatic hysteria, characterized by paralysis and other common signs of nervous trouble. When it was made clear to his mind that no money was in sight and it was a question of getting something to eat by his own endeavors, he got well. In another manufactory I have a record of over 700 patients without a single case of traumatic neurosis. In another company about the same number and no cases of neurosis. I was chief surgeon of the C., S. & H. for several years and treated something over 400 injured employes. Only one made a claim for damages that might be classed under traumatic neurosis. This case, in my judgment, was clearly a case of malingering. The suit which he brought several years ago was recently thrown out of court on a legal technicality. Of eight or ten passengers hurt in collisions who came under my care, both directly and indirectly, three developed marked symptoms of traumatic neurosis, two of them neurasthenia and one hysteria. None of these had a visible injury. All fell into hands of attorneys promptly, and progressively developed the symptom complex of traumatic neurosis as presented so clearly by Dr. Rutter. All got well when settlements were made. Dr. Kinsman saw one of these cases in consultation. It was a lady of neurotic temperament. She was in a wreck but was not injured physically. Forty-eight hours later had an attack of pronounced hysteria; complained of pain in cervical spine. She gradually grew worse until one year had elapsed, when she had paralysis of left arm and other neurotic symptoms that were sometimes alarming. The company, through my advice, settled the claim. After a few months the patient recovered. This was not a case of simulation or malingering, but was due primarily to mental impressions of the scenes witnessed in the wreck and secondarily by influence of a suit in court. My experience with injured persons on street car lines has been largely among passengers, either as surgeon, consultant or expert witness. It is a well known fact, sustained by my personal observation and statistics of corporations, that injured employes infrequently develop nervous conditions.

My conclusions are, after a careful study of several thousand cases, that when there is no possibility of gain, slightly injured persons forgot their injuries and resume their regular avocations. This is brought about largely by the fellow servant law which prohibits claims when employes are injured in line of duty or by negligence of a fellow employe. On the other hand passengers have no such restrictions. A passenger may receive a slight strain from being jerked by the car starting or stopping suddenly, or may fall in getting on or off the car or may be slightly injured in numerous ways. The immediate tenderness or inconvenience occasioned by the injury is followed by suggestions of indemnity. This may come through friends, impecunious attorneys or the patient's own mercenary mind. Now comes the development of the neurotic complex. These cases are of two kinds; the malingerer and the truly affected. The former, unless an expert at simulation, can be undone by careful examination. The etiological factors in the latter cases are the interesting conditions sought for by the profession. I shall not dwell on the diagnosis of these cases. It has been fully set forth in the excellent paper of Dr. Rutter, but will confine myself to a few words relative to prognosis. Out of about twenty-three cases of functional neurosis coming under my notice in the last five years, both directly and indirectly, all have recovered but three. The latter were cases of injury to the head followed by nervous symptoms that grew worse and finally terminated in permanent neurotic conditions. In these cases there was probably brain lesions that could not be diagnosed in early stages. The twenty cases gave histories of minor injuries, mostly to spine or head. Damage suits against offending corporations were contemplated or brought in each individual case. In no single instance do I know of one of them that did not recover after the pending suits were settled, either by compromise or litigation. If my experience is that of other surgeons, Dr. Rutter's criticism of the statements of expert witnesses in trials is scarcely just. I will read from an opinion given the Columbus Street Railway Company by Drs. Kinsman, Leach and Means of a patient suffering from traumatic neurosis and seeking damages:

"Mr. S.; evidently suffering from a disease of spine in the cervical region, and from a history of the case as given by Dr. Kinsman we believe it to be progressive and that he will eventually die from the same. We can not determine any relation between primary injury and his present condition. There are no signs of injury to the tissues, nor does the patient make any statement leading us to believe that lesion occurred at the time of the alleged injury."

It is not necessary to read the remainder of this report. It was our opinion at the time of the examination that it was one of the most typical cases of hysteria that we had ever seen and made the above report to the company. A settlement was made some time after and the gentleman has been restored to health. He was not a malingerer, neither do I believe he was simulating the conditions that presented during our examination. The first question, therefore, in such a case is, what leads to the development of the nerotic symptoms, and second, will they disappear on settlement of claim? I might relate a number of equally interesting cases all tending to support the same thought. It seems to be in the light of this experience that medico-legal complications are very important factors both in the cause of traumatic neurosis and in the prognosis.

Dr. J. F. Baldwin: I was very much interested, indeed, in the reading of this paper, the subject matter of which has been discussed several times by Dr. Rutter and myself in connection with the examination of plaintiffs in suits for damages. I was reading a very interesting account in a medical journal this afternoon of an obstetrical case in which the woman, mother of four children, while in the midst of her labor pains suddenly imagined that her husband was her father, that the attending physician was her lover, that she herself was an unmarried girl. She carried the idea out to the end, and finally when her child was born she was horrified at the thought of giving birth to a child, being unmarried, and she wished to get at the "brat" as she called it, that she might strangle it to hide her shame. This mental condition continued for four days. On the fifth day she awoke from a refreshing sleep entirely herself, and in utter ignorance of all that had transpired. Here, I think, we have one form of traumatic neurosis, the traumatism being effected by the labor pains, and the neurosis being fortunately of short duration. We can easily imagine, however, that the temporary condition might have become permanent, and we would then have called the neurosis insanity, and the patient would have been transferred to the insane asylum. Any other traumatism might have produced the same train of symptoms. According to Tuke ("Influence of Mind on the Body") the slightest injury, or no injury, as in some of the cases referred to by Dr. Kinsman, may set in motion a something which may produce most serious results, sometimes even fatal results. Many such cases are on record. We know, however, as an absolute matter of fact, that in an enormously large proportion of cases in which damage suits are brought, the plaintiffs recover, and usually very promptly recover, after the termination of the suit, whether that suit is decided in their favor or against them, or whether it is decided by settlement or by due process of law. Now if we concede that there has been some sort of a traumatism, which has set in motion a train of symptoms resulting in such a serious condition as has been depicted by Dr. Rutter, and that as soon as the case is settled that chain of symptoms takes a turn for the better, so that the patient finally recovers, is it not pretty safe to assume that if there had been no possibility of recovering damages in the first place, so that no suit would have been brought, that train of symptoms would not have been started, and the patient would not have had the trouble? Dr. Means has just reported to us a very large number of cases in which workmen in factories and on railroads received injuries, but without the development in any of these cases of traumatic neurosis. Dr. Hoover, who for twenty-four years has been surgeon of the Panhandle and other railroads in Columbus. tells me that he has never had a case arise among the workmen whom he has been called upon to attend. Now it is a well known fact that in practically all of these cases, owing to what is known as the "fellow servant" law, the employer is not responsible to the employe, and hence no suits can be maintained. No suits are brought and we have no cases of traumatic neurosis. These suits are brought by passengers on railway or street cars, as a rule, since they can readily charge the company with the negligence of motormen or conductors. These cases promptly develop neurasthenia, and have no trouble in finding attorneys to institute suits, but thousands of others similarly injured, but who can not bring suit, never develop any of these neuroses. Is it not, therefore, very possible that the patient having in mind constantly a possible suit for damages, soon manifests a train of symptoms which would not develop but for this possibility of litigation? Like the other gentlemen who have spoken, I have been consulted in a large number of these cases. I have been a witness in a large number, and have been consulted in many more. I am firmly convinced, however, that if the statutes were such that no suit of this kind could be maintained in which there were not some distinct physical manifestations of injury occurring at the time of the accident, or developing so soon thereafter as to make their connection with the traumatism direct and reasonable, great good would result. In very rare instances, to be sure, such a law would result in injustice to some individual, but on the whole the ends of justice would be best conserved. Our courts are lumbered up with these suits, the vast majority of which would never have been brought if the patient was obliged to show something objective to the court, and to the experts. Accident insurance companies stipulate in their contracts that the accident must be such as to produce tangible objective manifestations. If they did not insert some such clause they would be overwhelmed by suits of the kind under consideration.

Dr. D. N. Kinsman: I know very little about this subject. I have seen any number of cases which I suppose might be denominated traumatic neurosis or traumatic neurasthenia, whichever term you choose. I am convinced that it makes no difference whether the patient gets well after the damage suit is settled or whether the patient does not get well. An injury has been done and the patient responds to that injury by the class of symptoms which have been so completely and fully described by Dr. Rutter. It is not a pure hysteria. Some weeks ago I read a paper in the hearing of a great many of the members of this association, trying to diagnosticate between what we know as traumatic neurasthenia and hysteria. In hysteria we have in the beginning a special mental condition, as I then cited, "a condition in which the ideas control the body and disturb its functions." That is hysteria. But here is a condition in which the initial factor is an injury and it does not make any odds whether it is simply a mental disturbance and nervous shock, or broken bone causing it. The patient is injured. We know that people die, drop in their tracks dead from excessive joy, or receiving bad news, and they are just as fatally injured by that as they would be if they had been knocked on the head with a ball club. To me it is nonsense to say that persons can not be injured psychically as severely and that that injury would not prove immediately as disastrous to health and to life functions as any of these major accidents that you can see signs of. I suppose all of you have known persons who seem to be perfectly well have been passing along the street and some peculiar phenomena met their eyes and at once they fall as though they were struck. You say it is fainting away, but suppose it is permanent, what is it? It is death. Now, what has caused it? When you speak of instantaneous fainting it is simply instability of the nervous organization and there has been a sudden dilatation of those numerous veins in the abdomen, the blood stagnates there, the heart is no longer filled so as to maintain a column of blood in the brain. Injuries or purely mental shocks may lead to disorganization of the nerve cells to an extent to produce immediate death. Suppose it does not and this patient goes on weeks and months after that and gets well after a while, shall we say there was nothing the matter with that patient? Shall we say simply because the patient got well it was shamming and humbug? I can not understand it that way. I have the fullest kind of sympathy with the writer of this paper and I think he has done a great service in bringing together the peculiar features of what we know as traumatic neurasthenia or traumatic neurosis, or railroad spine, or injury exhaustion, or whatever you call it, and I thank him above all things for saying what he has said here, in spite of all the suppositions that may surround these cases, there is nevertheless a basis for these suits, no matter whether they get well early or late after a verdict or before it or whether they die. This man that Dr. Means says got well has never recovered from the tremor that scared him (Means) nearly out of his boots. He thought he was going to die when I made that experiment. He thought it was fatal then—didn't you, Dr. Means? Dr. Means: I did, certainly. Dr. Kinsman: That is it. The experiment was this: the man with closed eyes was required to put up his hands and touch his fingers together in front; he was overspread by a tremor from head to foot and his pulse became uncountable and he looked as though he was going to die. There was no mistake about that, there was no humbug about it. Dr. Rutter has seen that case. Do you mean to tell me, even if that man got well, as Dr. Means says, that he was not suffering anything then? I didn't know then but that man had disseminated sclerosis of the spinal column as a result of this injury. He behaved like it. He was one of the most athletic men in this city before his injury, and had a grasp of forty at one time and it went down to twenty and less, yet the man was doing the best he could. He had nothing but a broken leg to show for it that you could see. Now, I know perfectly well that that man was hurt. I know that when we were examining him there was instability of the neural elements which was revealed by these manifestations. I congratulate Dr. Rutter on the paper he has written and upon the very admirable description he has given. He acknowledges, as we all do, the impossibility of pointing out a physical basis for it, but there must be a physical basis there for it, or all these nervous symptoms could not come up as they do. These patients lose their sight, their hearing. They get so, as the doctor tells you, they lose tactile sense, you can, by piercing them with instruments, awaken no sensation of pain. Do you believe that is simply malingering all of the time? I do not. I have sympathy for those folks. Notwithstanding the reports from Southwick tonight—I do not believe he ever will be well. I saw the case the other day.

Dr. C. C. Carter: In my opinion it would be a very unjust matter to require a person to present objective symptoms. Not long ago I had a case of this character, a woman suddenly threw herself on the ground to escape from a very imminent danger. She was taken home. I was called in. I found the woman when I got to the house standing up in the room and making a good deal of complaint, she could not sit down or lie down. I picked her up, lifting her clear of the floor, thinking perhaps her thigh was broken. I laid her on the bed and made a careful examination. I found no physical injury whatever. In the first place, in this case, there was no possibility of the woman bringing a suit for damages. She did not intend to bring it and would have had no grounds for a suit against anybody. There was no motive of that kind in this instance. I examined the woman carefully and found not the slightest evidence of injury, not even a bruise. She was the mother of a family. She lay in bed for some weeks. She compained of pains and could not get up. Then she left the city and as far as I know she is still apparently unable to walk, although there has been no physical injury discoverable whatever. Now, there is another case I read about of a sailor who went down on a British battleship and was blown to the surface by an explosion. There were no injuries to speak of, yet he was unable to walk with any satisfaction, because he would fall backwards. He presented other symptoms of nervous disorder which I do not at this moment recall. There were no objective symptoms except some wasting of muscles of legs from disuse. I remember that in attempting to walk he would fall flat on his back and he drifted around from one hospital to another for three or four years and was finally cured by suggestive treatment. There was no motive for that man to bring a suit for damages. There was no possibility of his bringing a suit owing to the regulations governing his service. So there are some cases like that where symptoms exist which are just as real as the symptoms of any physical injury could be. We may call them victims of hysteria, which we now know certainly is just as much a disease as is any other disease, which may be caused by a physical injury. It is really a psychic shock and on a par with the case which Dr. Kinsman referred to this evening, arising from fright or from emotional disturbances, and in which there were no physical symptoms whatever to be found.

Dr. H. C. Rutter: I have just one word to say in conclusion. I find it impossible to coincide with the views expressed by Dr. Baldwin that because a possibility exists, no matter how freuqently it may be made use of to extort money improperly from corporations, that therefore no case of traumatic neurosis should be heard in courts unless it presents physical evidences of injury. In the first place such a law would be unconstitutional, because it would take away the right of a person to be heard, and in the next place it would be very unjust to the exceptional cases which had merit. *Some* cases have merit, and to sift these cases from the imposters is the duty of the court and jury. If one case in a thousand merits a verdict, then that one case should be entitled to a hearing, and to deprive him of the opportunity of being heard because the other nine hundred and ninety-nine were imposters, would upset all ideas of justice and overthrow our entire system of legal procedure.

Dr. Means recognizes the existence of the disease described, but contends that it must be very rare. He shows that among a large number of accidents coming under his observation a comparatively small number were of this description; that among a large number, perhaps twenty-five hundred cases of injury coming to him from workshops, none were of the character of traumatic neurosis. At first glance these figures might and do seem formidable; but when we consider the fact that Dr. Means is but one of more than four hundred physicians in this city, and that all of the cases of traumatic neurosis reported in the city during the last few years would not reach more than a score or so, one can readily understand how, even with his large experience, he may not have seen more of these cases.

It is true, as he states, that the larger number are passengers, and not employes of the railroads. It must not be forgotten that employes become accustomed to the operations of the roads and an accident does not have the same effect upon them that it would have upon women, for instance, who are unaccustomed to travel, and who are easily impressed by any shock; also it is to be noted that all—practically—of the injuries treated by Dr. Means in the shops were injuries received without any psychic shock. We could not expect traumatic neurosis to follow such injuries. It is generally when associated with sudden fright, as accidents on steam and street railways usually are accompanied, that we find the disease developing as a result, partly and sometimes wholly, of the sudden impression made upon the mind by the threatened danger. Many people have been killed by fright; many more have been disabled, some permanently, and some temporarily, by a neurosis following the mental shock and traumatism.

The first anniversary of the new hospital at Marion, whose friends hope to have it adopted as a city and county hospital, was celebrated on the 12th inst. Governor Myron T. Herrick, Judge W. Z. Davis, Lt. Harding and other prominent speakers were present. Dr. Horatio Chisholm is president of the hospital association. The governor's interesting address on that occasion is published elsewhere in this issue.

INTERMITTENT CLAUDICATION.

BY GEORGE F. ZINNINGER, CANTON, O. *

Intermittent claudication is the name given by Charcot to a disease, or rather to a syndrome of symptoms constituting a distinct clinical entity accompaning an obliterating arteritis of the vessels of the leg and foot. The disease was first described by the French veterinarian, Bouley, as observed in horses, the pathology of which is an ischemia in the areas of blood distribution to the hind legs due to vermivorous aneurysm of the femoral arteries. The symptomatology in the horse being an intermittent halting when the horse is being driven in a trot, soon to disappear upon resting, to be again repeated presently after starting. Charcot being familiar with the symptom manifestation of the disease as observed by veterinarians, by his keen clinical insight transferred the clinical picture to observations he made in certain cases in man, and so established upon a sound pathological basis the disease which he named intermittent claudication, demonstrating that it is due to an ischemia of the musculature of the legs dependent upon an obliterative disease of the vessels, in most cases an arterio-sclerosis, thus taking it out of the category of diseases of the peripheral nerves or spinal cord.

Some time after Charcot's paper the disease began to receive attention at the hands of German observers who designated it by the descriptive name *intermittierendes hinken*, and still later excellent articles by Russian physicians appeared, in whose country it is more frequently met with, no doubt, than in any other. In 1898 Erb, in a very elaborate study, (Deutsche, zeitschrift fr nervenheilkunde, No. XIII, 1898), described the disease and named it by the appropriate name dysbasia angiosclerotica. In this paper Erb reported twelve cases, and again during the current year, (The Mienchener Medizinische Wochenschrift, No. 21, May, 1904), he adds forty-five cases personally observed during the past six years. In parenthesis we may say that this article may be taken as a model for conciseness, brevity, analysis and classification.

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* Read before the Canton Medical Society, Friday, March 3, 1905.

That comparatively little attention has been paid to the condition is evidenced by the few papers that have appeared on the subject, yet mention should be made of the more or less elaborate ones by Oppenheim, Goldflam, Higier, Hagelstam and Indelson, abroad; and by Dana, Walton and Burr in our own country. That the rarity of the disease is more apparent than real, however, is made clear from the fact that Erb from his own material has seen forty-five cases during the past six years, a fact quite convincing that the disease is not usually recognized. Not being thought of or looked for; fulfilling one of Osler's oft-repeated sayings: "That rare conditions are found to be present just in proportion as looked for and recognized."

While some variability in the clinical picture of the disease is met with, yet the symptomatology is remarkably true to a recognized type so as to be unmistakable and easily diagnosed. In a characteristic case the patient, under exertion, or during brisk walking experiences various parasthesiæ and pain in the feet and extending to the calf muscles and often involving the whole of the limb. Quickly following there is a feeling of stiffness or even cramp in the calves and thighs. If at this juncture the patient sits down these sensations soon disappear, but if walking is persisted in he is brought to a halt by the overpowering action of the muscular stiffness and contractions. After a short interval of rest the patient can again resume his gait only to again have a recurrence of the symptoms in the same order of sequence.

Subjectively the patient may experience besides the pain a sense of heat, but more often it is that of clammy coldness in the affected part. Objectively the limb may show no vasomotor disturbances, but usually it is of a dusky or livid redness, or cyanotic; and in others though less frequently of a pale bloodlessness and dry or moist coldness. In every case, however, there is either entire failure of palpability of all four pulses in the foot or merely the most feeble pulsation in all or part of the arteries palpable. The vessel walls are to be felt as hard tortuous cords. While the great majority of all cases conform to this typical type, atypical cases in which we may have merely intolerable weakness with parasthesia, or with pain which may even grow better under light exercise, or coldness with cyanosis and pain is found, or stiffness in the calf muscles, or in fact any combination of characteristic symptoms can exist without intermittent lameness; but always we find failure or great reduction in palpability of pulsation accompanied by highly sclerotic arteries. The disease is almost wholly confined to the legs, yet cases involving the arm alone or accompaning the condition in the legs have been reported! It is usually a bilateral disease, being so found in about 75% of all cases, and when found unilateral the ratio of left to right is about as 3: 1.

While, as above stated, the foot pulse is found absent in the great majority of cases, it is often feebly present in otherwise typical cases, but the vessels are always thickened, hard, tortuous and highly sclerotic, a postulate always verified at necropsy save in exceptional cases in which the lack of blood supply to the limb depends upon accidental causes. An interesting question arising is, whether vaso-motor disturbances in otherwise healthy arteries by ischemia, due to spasm of the vessel walls, is capable of inducing an attack, i. e., whether neurasthenic types of the disease exist? While a few observers believe such to be possible, yet so far as I have been able to ascertain no such case with autopsy has been reported.

Since a high grade of localized arterio-sclerosis is the usual condition found present a further very interesting question is whether these cases show a generalized or equally distributed universal arterio-sclerosis? It would take us too far afield to enter into a discussion as to the etiological factors in the causation and distribution of arterio-sclerosis; suffice it in this connection to say that factors of great moment favoring localization must be considered equally potent with those favoring generalization of the disease, and that the presence of even advanced or of extreme degree of localized arterio-sclerosis is not to be considered an index to postulate arterio-sclerosis throughout the whole arterial system. In confirmation of this contention, referring to Erb's series, while he found generalized disease in the great majority of his cases (37 out of 45), and in 33% accompanying disease of the heart, he never met with even a single case of true contracted kidney, and in only two of his cases was he able to demonstrate albumen in the urine. Upon clinical grounds I have long been convinced of the fallacy of assuming from the mere presence of palpable radials, femorals, and tibials the presence of an equal grade of disease throughout the visceral cavities, viz.: chest, abdomen, and brain, as well as the converse of this proposition, the absence of the disease of the arteries of the brain, thoracic and abdominal viscera, or coronaries when the peripheral arteries show apparently no change to the palpating finger. Relative to this I shall presently again refer under etiological factors.

The alternating presence and absence of palpable pulse in the affected extremities depending upon vaso-motor states, heat, cold and other intrinsic and extrinsic influences is demonstratable in certain cases as one would naturally expect. Intermittent lameness shows one constant anatomic lesion, a chronic thickening of the arterial wall of the arteries supplying the affected limb, intermittent lameness occurring when the pathological process has proceeded far enough to seriously interfere with the blood supply to the parts.

The blood stream being sufficient for purposes of nutrition of the muscles when in a state of rest, becomes inadequate for the same when functionating, thus explaining the paroxysmal recurring sequences seen in clinical cases. The lesion producing this arterial thickening is in the great preponderance of all cases an arterio-sclerosis, the exceptions being those occasional cases dependent upon accidental causes interfering with the blood supply to the legs, viz.: pressure of neoplasms, wearing of trusses, healed aneurysms, etc., etc. The onset of the disease is usually an insidious, and the course a more or less progressive one, hence cases showing initial symptoms of parathesia, weakness and stiffness in the muscles of the legs in cases above 40 years of age, should not be dismissed by the usual diagnosis "neurasthenia," but careful physical examination made of the state of the arteries supplying the parts. Closely allied to this disease is angina pectoris, severe paroxysms of abdominal pain associated with sclerosis of the mesentery arteries, Raynaud's disease, and erythromelalgia. In the first we have the paroxysmal nature of the attack, the accompaning pain and usually stenosis of the coronaries dependent upon a high grade of arterio-sclerosis; in the second the attacks are also paroxysmal, the pain intense and stenosis of the mesentery artery the usual anatomical condition.

In erythromelalgia or Wier Mitchell's disease, his views are still that it is due to a peripheral or end neuritis, the presence of which can be demonstrated in a great many cases, yet there is a growing conviction that the essential lesion is a vascular sclerosis which seems to be present in all cases, including those in which no neuritis has been found, hence the strong presumption is that the neuritic changes are secondary to the primary ones in the vascular system.

The nervous symptoms following peripheral vascular diseases have received a great deal of attention of late years, and while much chaos still prevails, yet many facts have been disclosed which have taken many symptoms from the domain of the cord and peripheral nerves and placed them in the category of the peripheral vessels.

As to the etiological factors in general one may say that they are those which tend to produce arterio-sclerosis in general and as to these in reality we know but little. The classical ones usually assigned, viz.: worship at the shrines of Vulcan, Bacchus, Venus and Mars, i. e., hard work, alcohol, syphilis and exposure to cold. Just to what degree each one separately is to be considered etiologically is hard to assign, for the devotees who worship at one of these shrines are the very ones who are the most prone to be polytheists. In addition to the above mentioned causes one should not forget to mention constantly overeating, metallic poisons, such as lead, diabetes, faulty purin metabolism, usually designated as gouty states, and following acute infections, especially, as recently emphasized by Thayer, typhoid fever.

In the study of the etiology of many conditions I am of the conviction that in the past too much stress has been laid, especially in text-books, upon factors acting singly as causative of many diseases and not enough upon combinations. I think it would be hard to prove, save with the exception of hard work, that any one of the above causes acting singly is responsible for a given case of arterio-sclerosis.. Causes producing disease seldom act singly, but usually in conjunction, and this is precisely the way we meet with them in practice.

A man may for years consume large quantities of alcohol, and so far as the alcohol, per se, is concerned may not become arterio-sclerotic, but let the same individual be at the same time employed constantly at hard physical labor, or let him be one of the modern "captains of industry," plus alcoholic addiction, plus other vices, then I believe he has more than trebeled his chances to develop arterio-sclerosis; and just as mathematically permutations are possible, so in reality is it possible to have the various etiological factors acting in combination, and just so we find it in the history of our cases. Erb, in an analysis of his cases, could not lay any great stress upon syphilis and alcohol as etiological factors, but is inclined to believe that exposure to cold was active, and that the excessive use of tobacco is a very great causative agent in the production of the disease.

Ten of his forty-five cases came from Russia (which is a much higher per cent than his cliente from that country), and most of the various series of published cases have been reported from that country. When one comes to consider the social conditions and the climate of that country, it may speak for cold as a causative factor in its productions. In reference to his statistics as to the use of tobacco, they are as follows:

The notes are silent in	7 cases
Non-users or light smokers	13 cases
Heavy smokers	10 cases
Very heavy smokers	15 cases
Total	45

In Goldflam's series nearly all were heavy smokers. That women are almost exempt is shown by the following figures: If you add to Erb's (58) cases in which he met with but one woman, the 18 reported cases by Higier, the 26 by Goldflam, the 14 by Indelson, the 7 by Hagelstarn, and the 4 by Oppenheim, we have 120 males and 7 females. This overwhelming number being found among the male sex is capable of various interpretations, none of which have much to be said in their favor other than that they are surmises and speculations. As to treatment little need be said. In all cases the cause should be determined and removed. The patient should live the strictest hygienic life, avoiding all excesses, especially exercise on foot. Heat, footbaths ,galvanism, and massage may be tried. Cardiac tonics, such as are not vaso-constrictors, iodides and nitrites and nitro-glycerine, are indicated.

The following case of generalized arterio-sclerosis typically manifested the condition under consideration:

Mrs. Kath. S——, German, age 66. The data regarding patient's family history are meagre, but as follows: Father died in old age of unknown disease, while mother some time past middle of life, age about 50. The patient was the youngest of six children, all of which passed the fortieth year, and most reached old age, the causes of death not obtainable. Patient was well as a child and developed into robust and rugged womanhood, being strong and muscular; worked very hard as a German peasant at farm labor, carrying very heavy loads and exposing herself barefooted to many extremes of wet and cold. When she came to America at age of 44 she weighed 175 pounds. She was married at age of 46, has never borne children, has never worked hard since coming to America. She possessed rugged health until about five years ago, since which time she has gradualy lost weight and strength.

About February, 1904, patient began to experience difficulty in walking. After walking several blocks began to have paresthesia, pain and stiffness in her right leg which, if she would sit down, would disappear, but if walking was persisted in, she would be compelled to come to a halt. After a brief interval of rest patient could again resume her gait, soon again to experience another repetition of her attack. The patient gradually described the sequence of events in her case as follows: A creeping or pins and needle sensation, increasing stiffness accompanied by severe pain until the limb would be held immovable against any effort of her will. The patient, owing to her disability, refrained from frequenting the streets very often, and when leaving her home always selected the side streets to avoid the gaze of persons observing her strange actions.

Physical examination: First saw patient July 2, 1904. Patient tall, of large frame, evident muscular atrophy, skin of dark, swarthy color, mucous membranes not anemic. The pulse somewhat irregular, small and apparently of no great plus tension. All the palpable vessels are hard, beaded or cordlike. The heart's apex beat as in fifth interspace within the nipple line, no palpable thrill, and no murmurs. A slight accentuated aortic second the only deviating sign discoverable. Examination of abdomen negative. The left limb is slightly smaller than the right; it was cold and of a dusky, livid red color, and at time of this examination not the seat of any pain; no pulsation in any of the four arteries of the foot could be definitely made out in the cord or rather wirelike vessels. Westphall's sign normal in both legs. No Babinski reflex, and no ankle clonus. Tactile, pain, and temperature sense unimpaired. Romberg's sign negative. Urine negative. On July 15th, I made the following note: The limb very suddenly following a brief paresthesia became very moist and cold, of very dark red color and the seat of the most anguish and excruciating pain. Has had at irregular intervals during the preceding two weeks several similar though less severe attacks. In concurrence with the last attack (second day) had an attack of agonizing pain in precordial area radiating down the left arm. During these attacks the heart's action became very feeble and irregular and the patient had a facial expression indicative of enduring intense agony. These attacks repeated themselves at irregular intervals of days and lasting from 6 to about 36 to 48 hours until July 24, after feeling unusually well for several days very suddenly was seized by a violent rythmic, slow tremor of the right arm occurring in paroxysms and lasting several hours, the muscles being in a state of spastic rigidity. This attack was accompanied by a dazed state, patient having a vacant stare, and during which time patient failed to recognize familiar faces and surroundings, but at no time did she suffer any pain. After twenty-four hours recovered her former mental state and without loss of any sense or motility of the affected arm. Shortly after, within another twenty-four hours patient again developed a severe pain in left limb which for the past week or ten days had been so cold, blue and pulseless that death by gangrene en masse was feared; following within a few hours had accompaning pain in abdomen and precordia, cardiac action growing continuously more feeble, a dusky hue, accompanied by coldness came over the whole body, mental dullness deepening into unconsciousness, supervening upon the pain, the temperature for the past twenty-four hours gradually falling and falling, patient dying without developing pulmonary ordema on July 28, 1904.

No autopsy permissible. Clinical diagnosis was high grade general arterio-sclerosis, with manifestation of the symptom syndrome of intermittent claudication and angina pectoris.

The treatment early was avoidance of undue exertion and later rest in bed, warm footbaths, and local applications of heat. Morphia and heroin to control the pain and liberal use of nitroglycerine in ascending doses, which based upon clinical judgment was the only one of the above and several other remedies tentatively tried, which had any positive symptomatic action, seeming to control the pain even better at times than morphia.

REPORT OF CASE OF TONSILLAR TUBERCULOSIS.

BY C. S. MEANS, B. S., M. D.,

On December 14th, Dr. K. came to my office giving history as follows, hemorrhages, fever, nightsweats, loss of appetite, rapid loss of flesh, great languor and general depression.

His age is 29 years. Graduated in medicine in 1898. Since then has had a very large country practice, necessitating a great amount of work and loss of rest.

In October, 1904, he began to lack ambition, appetite was poor, losing weight, could not do the work that he formerly did without getting very tired. About last of October began to have gagging and coughing spells, especially in the morning when rising. It seemed as though there was something in his throat that would make him cough. This was soon followed by hemorrhages. Each time he would wretch or cough the sputum would be streaked with blood, usually dark and clotted, but this gradually grew worse and hemorrhage became more profuse and the blood of a lighter color. Nightsweats began to appear, his temperature in the afternoon ran along about 99.5, chills, usually worse at night. The nightsweats increased in severity until they were profuse. He would rise in the morning with excessive coughing and after his coughing spell was over he was unable to eat any breakfast or scarcely able to get around on account of extreme weakness. On December 12th his temperature was running 103.5 and was confined to his bed for three days. Appetite was poor and sweats profuse. After this he could bring blood at any time he would clear his throat or cough. He would also be awakened from his sleep by a choking sensation and rattling in the throat. Then he would cough and expel considerable amount of blood. This would always give him relief. He had lost fifteen pounds in weight. He is a man six feet high and weighs from 175 to 180 pounds; has excellent family history, he being one of nine children, all living. Father and mother well.

He was treated with various remedies by his fellow practitioners in the town in which he was located, took immense quantities of quinine, thinking it was malaria, but he was gradually growing worse and felt that he was doomed to die unless this could be stopped very shortly.

He came to my office December 14th. I immediately had his lungs examined by Drs. D. N. Kinsman and W. J. Means. They both reported negative. Nothing to be found in his lungs. Bacteriological examination negative. I then examined his throat and found throat normal except a large Luschka's or third tonsil with small clots of blood at several points over its surface, no breaking down or ulcerations. The tonsil was just about the same in its general appearance as we find in many throats, yet from his history and from these points of hemorrhage, I explained to him that it was worth while at least to remove a portion of this tonsil and have it examined by the bacteriologist. December 15, under cocain anesthesia, I removed a portion of this tonsil with a curett. It being so painful to him in his weakened condition he was wholly unable to stand a complete removal. However, the portion I did remove was examined by Dr. Scott, who found numerous tubercle bacilli present in the section of tissue examined. None had been found in the sputum before. No test on the animal was made because too much time would be consumed before the result would be found. I ordered him treated with gargles or antiseptic throat wash and an application of 10 per cent. argyrol to the diseased points.

He returned home the next day and as he put it, felt greatly relieved from the operation that I did. His temperature dropped to almost normal (see chart), his appetite increased and he was generally in a very much improved condition. I explained to him that if this was really the seat of trouble, it was imperative that he should return and have a complete removal of the diseased tissue. This he did. December 29, under general anesthetic, I removed the remainder of the adenoid tissue.

He has never had a rise in temperature above 99 since three days after the removal. I have had a daily record of his temperature since that time until January 20, when he felt so well that he said there was no use in taking his temperature any more, that he had never found it above 99 for weeks. He has regained all the flesh he lost and says that he is feeling better than he has for years. A letter from him February 20 states "he is well and no symptoms of any trouble and has regained his normal weight."

I appreciate that this is too short a time to say that we have made a perfect cure, but I reported it for two reasons, first, that it is a very interesting case to me; second, that I believe it proves that we have more cases of localized tuberculosis in the tonsils than is generally discovered.

In all the literature that I have been able to find I have seen but one case resembling this one and it was reported cured.

If we can discover the primary lesion of tuberculosis in the throat as this was discovered I believe a great majority of our cases can be cured before the lungs become affected and therefor, lower the mortality in this dread disease.

Dr. W. L. Dick, for twelve years connected with the Ohio Medical University, first as professor of anatomy and next as professor of orthopedic surgery and orthopedic surgeon to the Protestant Hospital, has resigned his position and located in Pendleton, Oregon, where he is associated with his nephew, Dr. Charles J. Smith. The latter having been elected to the state senate, and having a large practice, offered flattering inducements to Dr. Dick to become associated with him.

Dr. Dick's removal to Oregon is a distinct loss to Columbus, the Ohio Medical University and the Protestant Hospital, where he had attained more than a local reputation as an orthopedic and general surgeon. His thorough knowledge of anatomy, soundness of judgment and devotion to his profession won for him the esteem of his associates in the faculty, students and the profession in general. The best wishes of his many friends in Ohio go with him to his new field of labor, where we wish for him abundant success.

HOSPITALS.

AN ADDRESS AT THE DEDICATION OF THE MARION COUNTY HOSPITAL, APRIL 12, 1905, BY GOVERNOR MYRON T. HERRICK.

On the occasion of the opening of a hospital at Marion, O., April 12, 1905, the principal address was by Governor Myron T. Herrick, who said in part:

"The first hospital, or one of the first, was established by the Hospitallers of St. John of Jerusalem, A. D. 1118, and the new "Hospitalum" was dedicated to St. John the Baptist. The hospital became rich from the gifts of land and money. Those engaged in the work assumed the habit of a black mantle, with a white cross of eight points on the left breast. Many knights who had come to Asia in the Crusades to combat the infidels, laid aside their swords, and as brethren of the hospitalum devoted themselves to tending the sick and relieving the poor.

The order assumed a military character later on, combining the care of the sick and poor with the profession of arms, which characterized the Knights of St. John, a valiant order so familiar in history. The order grew and was known in many tongues and many nations. The Knights were distinguished by a white cross upon a red ground, and like our own Red Cross might have been famed as the White Cross of that day, for the Hospitallers were known, respected and feared far and wide.

The evolution of our Red Cross Society, and the internationalizing of the remarkable order in Geneva, Switzerland, in 1863, when twenty-five governments entered into a signed treaty providing for the neutrality of all sanitary supplies, ambulances, surgeons, nurses, attendants, sick and wounded men, and their safe conduct when they bore the sign of the order, the Red Cross, mark one of the great reforms that have been brought about in the conduct of war.

Undoubtedly the white cross would have been chosen, but the Swiss colors were a white cross on a red ground, like the emblem of the Knights of St. John, and as the society was to be an international affair, it was not deemed advisable to adopt an insignia which might in time of war be confounded with any national color. The Red Cross Society was formed since the Geneva convention and had its inception in the mind of a Swiss physician by the name of Henrie Dunant.

Public charities are usually prompted by two impulses—one, to leave behind an enduring monument, and the other, to perform some lasting and noble service, and there is perhaps a mingling of these motives in many of the munificent benefactions of today. Whatever the motive, the fact that substantial good to humanity has been accomplished will serve to cause the donors to be ever held in grateful remembrance.

The practical spirit of this age is being made manifest in the memorials that men are building. The Cooper Institute, in New York, was one of the pioneer twentieth century monuments, and the Marion County Hospital is a worthy member of the same class. They, by the inestimable good they accomplished to the living, serve to form the most imperishable monument to the dead. The memorials of bronze or marble may perish or disappear, but the good that men do, as represented by the splendid hospital, lives after them, and its influence is never lost.

"The duties of the citizenship toward the hospital" are many. The instincts and prejudices of a people are difficult to overcome. The dread of the hospital was for many years in every household. A certain ignominy, especially in country places, attached to the act of going to a hospital, which to the mind of many was equivalent to going to the poorhouse or to prison. But, fortunately, this prejudice has at last been overcome. Even for slight ailments or injuries the hospital is now chosen, on account of its superior facilities for the treatment of patients. Removed from the annoyances and inconveniences and unpreparedness, inevitable in most homes, to the hospital, surrounded by skilled, trained nurses and physicians of rich experience, the patient is filled with confidence and peace of mind, which often go a long way toward recovery. This change of sentiment is due to the scientific advancement, modern conveniences, and the efficiency of managers, physicians and nurses in charge of our hospitals.

I have the highest respect for the nurse, who, with a spirit of self-denial which the profession demands, enters upon her calling, imbued with a lofty impulse, a noble purpose, in order that for the many who fall in the battle of life there shall not be a lack of woman's nursing or dearth of woman's care.

The young man entering the medical profession, in casting about him, must certainly see that few legitimate practitioners ever amass large fortunes. He must also see that physicians as a class are a short-lived body of men, and that few are alive at the allotted period of three score years and ten. It is not alone for the hope of gaining that this young man enters the medical profession. Beyond the ambition to win distinction in his chosen profession, above all hope of competence for himself and family, the true physician is imbued with the desire to benefit his fellow man. The physicians perform more acts of real charity than any other class of our citizens.

One of the marvels of the day is the unostentatious and loyal devotion, the dedication of time and money, to the private charities throughout our entire country. Millions on millions year by year are devoted to this purpose—and by whom? By the almost countless thousands of wealthy people, people of moderate means, and people who can illy afford the annual donations they so freely make. The rich man's check, the laborer's wage and the widow's mite are represented in the maintenance and upbuilding of all these splendid institutions. The people who so willingly and with such Christian fortitude bear these burdens are people whose voices are rarely heard in public. They are the same class of people who are doing the world's work, doing things in industrial, business and professional life as they do in the cause of charity. In these days of outcry, and clamor, and impugning of motives, their voices are not heard. They do not belong to that class; they do not assume to be the keepers of the consciences of the people, but they make possible, by their industry and fidelity to all the duties of life, the existence of many, "Who toil not, neither do they spin," and who from the housetops assume to conduct and control all the affairs of life. Hatred, jealousy and revenge do not enter into their methods. Their way is the Master's way.

The philanthropists and charitably inclined of our people should feel themselves at all times charged with duties toward the maintenance of our hospitals. When they are disposed to do something to show their gratitude for the success or fortune which has come to them, how can they better accomplish it than by giving of their bounty to these worthy institutions that are so often called upon to be the refuge and the comfort of those who are neither successful nor fortunate?

I share with you, my friends of Marion, the best wishes and highest hopes for the long and useful life of this splendid hospital. May it never lack, as I am sure it never will, as indicated by the character of those who have created it, the most patriotic and unswerving support. God speed the physicians, the nurses and those in charge of it, to the end that it may be as the donor intended it—a blessing to the living and a benediction to the dead.

We are informed that a young man, styling himself as X. W. Wittman, was arrested on the complaint of a member of the local profession, with the concurrence of a majority of the practitioners of the town and fined twenty dollars in a magistrate's court in Lebanon, recently, for practicing medicine without a license. The charge was made that the young man diagnosticated and treated diseases for pay, while he contended he had not exceeded the rights of a street vender. He also claimed that he simply did what the local druggists were constantly doing.

Mortality report for Columbus during the month of March: Pneumonia, 44; tuberculosis, 32; typhoid fever, 30; organic diseases of the heart, 12; Bright's disease, 10; cerebral congestion and hemorrhage, 9; cancer, 8; paralysis, 8; senile debility, 7; diarrhoea and enteritis, 6; convulsions of children, 4; grippe, 3; purulent infection and septicaemia, 3; bronchitis, 3; lack of care of babies, 3; accidental traumatisms, 3; diseases of the nervous system, 2; affections of the arteries, 2; peritonitis, 2; suicide by poison, 2: unspecified or ill-defined causes of death, 2; rheumatism, 2; deaths from other causes, one each, 18; total, 215.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, April 3, 1905.

F. F. Lawrence, President. Chas. J. Shepard, Secretary.

Members present, forty-three. Cases were reported by Drs. Clark, Harris, Kinsman and Loving.

Dr. C. O. Probst read a paper on "Addison's Disease," and presented a patient with this rare affection. Discussion by Drs. Loving, Kinsman, Upham, Rutter and Chas. J. Shepard. Dr. Brown read a paper on "Embolism of the Central Artery of the Retina, Star-Shaped Lesions at the Macula, Sub-Hyaloid Hemorrhage, Parinaud's Conjunctivitis." Discussion by Drs. Timberman, Clark and Davis.

Dr. J. A. Thorne was elected to membership.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

The annual meeting of the Association of American Medical Colleges met in Chicago, April 10, at the Great Northern Hotel. There were present about fifty delegates from colleges, members of the association. The occasion for the meeting at this time was two-fold. Heretofore the meetings were held on Monday of the week of the meeting of the American Medical Association. Other organizations and committees such as the Confederation of State Boards of Examiners, the Academy of Medicine and others met on the same day and at the same hour; it was therefore impossible to co-operate with them in any work that was of mutual interest. Another factor in changing time was the place of meeting of the American Medical Association. To send delegates to Portland will entail considerable expense and it was doubtful if colleges would care to go to the expense to be represented at the annual meeting. For these reasons the date of the meeting was changed to April 10.

The meeting was interesting and the results will no doubt be far reaching in their effect on medical education.

A new constitution and by-laws was adopted. It embodied resolutions passed at former meetings, with several amendments.

The most important amendments were made in Article III. which we quote in its entirety.

II. REQUIREMENTS FOR ADMISSION TO THE MEDICAL COURSE.

Section 1. Every college holding membership in this association shall demand of each student, under the condition hereafter stated, as a minimum requirement for admission to the medical course:

(a) A bachelor's degree from an approved college or university.

(b) A diploma from an accredited high school, normal school, or academy requiring for admission evidence of the completion of an eight-year course in primary and intermediate grades, and for graduation not less than four years of study embracing not less than two years (4 points) of foreign language, of which one must be Latin, two years (4 points) of mathematics, two years (4 points) of English, one year (2 points) of history, two years (4 points) of laboratory science and six years (12 points) of further credit in language, literature, history or science.

(c) An examination in the following branches: A. Required (18 points): Mathematics (4 points); English (4 points); history (2 points); language (4 points—2 must be Latin); science (taken from physics, chemistry, botany, zoology, 4 points). B. Opional (to 12 points): English (2 points); history (6 points); language (6 points); manual training (2 points); mechanical drawing (1 point); natural science (botany, zoology; 2 points); physical science (chemistry, physics; 2 points); trigonometry (1 point); astronomy (1); civics (1); geology (1); physical geography (1); physiology and hygiene (1); political economy (1)—not more than 3 points accepted.

(One point in any subject in a high school or academic course demands not less than five periods per week of forty-five minutes each for eighteen weeks.)

(d) Certificates from reputable instructors recognized by the superintendents hereinafter to be mentioned, or by any state board of medical examiners duly authorized by law, may be accepted in lieu of any part of this examination.

Section 2. This examination must be conducted by or under the authority of the superintendent of public instruction of the city or state in which the college is located or by boards of examination and registration legally authorized. In no case shall it be conducted by any person connected with the faculty, medical or otherwise, of the institution to which the student is seeking admission.

Section 3. A student may be allowed to enter on his medical work conditioned in not more than six points, and these conditions must be removed by satisfactory examination before he is allowed to enter on the second year of his medical course.

Section 4. Colleges in membership in this association may honor the official credentials presented by students from other colleges having the standard requirements maintained by members of this association, excepting for the fourth year of their course, but no member of this association shall admit a student to advanced standing without first communicating with the college from which such student desires to withdraw, and receiving from the dean of such college a direct written communication certifying to the applicant's professional and moral qualifications, and to the exact work he has done in said college.

Section 5. Candidates for the degree of Doctor of Medicine shall have attended four courses of study in four calendar years, each annual course to have been of not less than *thirty teaching weeks'* duration, and at least ten months shall intervene between the beginning of the preceding course.

Section 6. Time credits may be given to students who have the necessary entrance requirements, and who are graduates or students of colleges of Homeopathic or Electic medicine, for such courses of instruction of the required duration as they have successfully fulfilled, excepting in the course of the fourth year, provided they pass satisfactorily examination in materia medica and therapeutics. Credit may be given to the holder of a Bachelor's degree from an approved college or university for any work in the medical branches which he has successfully completed in his college course, only so far as it is the full equivalent of corresponding work in the medical curriculum. The holder of such Bachelor's degree may also be given time credits of not exceeding one year, provided that such student has had at least 40 hours in physics, 144 hours in chemistry, 24 hours in osteology, 292 hours in human or comparative anatomy, 124 hours in histology, 85 hours in embryology, 145 hours in physiology and 46 hours in materia medica; *provided, the applicant for such time credits satisfies the examiners, as provided in Article III, Section 2, that his studies for which the degree was conferred include the above requirements.* Such students may be allowed. to complete a course for the medical degree in not less than thirty-one months, provided he completes the remainder of the medical curriculum in that time.

Section 7. A college which gives less than a four years' course of study, but does not graduate students, and is possessed of other required qualifications, may be admitted to membership.

Section 8. Each student shall be obliged to attend 80 per cent. of the exercises in every course of study for which he seeks credit. No student shall be given credit on examination unless he attains a grade of 70 per cent. or its equivalent in any other marking system, and no student shall be graduated unless he shall have attained a passing grade in each and all subjects of the required curriculum.

There was considerable opposition against the standard of high schools as above adopted. The opposition was led by the delegates and representatives of eastern and southern states. Three-year high school prevails in most of the eastern and southern states. It was argued that to make a hard and fast rule of twelve years, eight in the grammer department and four in high school, would prevent graduates of many high schools in the states mentioned from entering a medical college without examination and that this would work a material hardship upon the young men seeking to enter medical colleges, and also upon the colleges themselves. After a spirited discussion the four years' standard was maintained by a small majority.

The combined college course giving an academic and professional degree in six or seven years was discussed by several prominent educators. Among them were Prof. J. H. T. Main, dean of faculty of Grinnell College; Prof. S. D. Williston, and Prof. A. W. Small, Chicago. It was the consensus of opinion that a seven years' course was long enough for a young man to attend college for both degrees.

It was also the general feeling that the medical course should not be shortened, therefore the work of the first and second years of the medical course should be credited by literary colleges in granting an academic degree.

ASSOCIATION CURRICULUM.

The committee appointed one year ago to formulate a curriculum that would serve for the colleges of the association, reported one covering 4000 hours. The following is the report which was unanimously adopted.

Table No. 1.

COMPARATIVE STANDARD OF MEDICAL EDUCATION.

PROPOSED STANDARD.

	Number of hours of lectures in entire course.	Number of hours of Laboratory.	Number of hours of clinics.	Total.	Michigan Standard.	Average in 43 Medical Schools.	Average in 124 Medical Schools.
1. Histology	30	60		90			
2. Embryology	30	60		90	200	219	211
3. Osteology	30			30			
4. Anatomy	190	330		420	460	549	430
5. Physiology	180	120		300	300	376	341
6. Chemistry and Toxicology	100	200		300	350	375	345
7. Materia Medica	40	20		60	100		216
8. Pharmacology	40	20		60	60	118	60
9. Therapeutics	90			90	90		
10. Bacteriology	40	100		140	160	131	138
11. Pathology	100	140		240	240	295	251
12. Medical Zoology, Post mortem work and Clinical Microscopy	30	60		90			
13. Physical Diagnosis	20		80	100	100	61	97
14. Practice of Medicine	180		360	540	400	544	490
15. Surgery	180		360	540	530	598	536
16. Obstetrics	100		60	160	140	177	169
17. Gynecology	50		110	160	170	145	181
18. Pediatrics	40		60	100	110	72	98
19. Eye and Ear	30		30	60	200	106	124
20. Nose and Throat	30		30	60		67	65
21. Mental and Nervous Diseases	60		60	120	120	109	130
22. Electro-Therapentics	20		40	60	80		
23. Genito Urinary Diseases	30		30	60	60		74
24. Dermatology and Syphilis	20		30	40	40	64	80
25. Hygiene and Public Health	30			30	30	33	46
26. Dietetics	30			30	30		
27. Medical Jurisprudence	30			30	40		36
	1750	1010	1240	4000	4000	3937	4188

"The committee recommends that the standard curriculum which is to be adopted as a minimum for the degree of M. D.

conferred by any member of the Association of American Medical Colleges shall consist of the following:

1. The course shall consist of four college years in four separate calendar years.

2. Each term shall consist of at least thirty weeks of work, exclusive of holidays, and of not less than thirty hours of college work in each week.

3. The entire course of four years shall consist of at least four thousand hours, divided into the subjects as shown in the proposed standard of Table No. 1, and no college shall be recognized that falls below this standard over 20 per cent. in any one branch or over 10 per cent. in the total. (See table No. 1.)

One of the important amendments was specifying the conditions upon which time credits could be given for a Baccalaureate degree; another one requiring colleges to investigate the credentials of students coming from other colleges, by corresponding with the colleges from which the students came. There have been a number of instances of forged credentials in the last few years and this precaution will shut out such practices.

The annual membership fee was also raised to $25.00.

A number of colleges made application for membership but were refused on account of lack of teaching and clinical facilities.

By invitation several committees were appointed to meet the various organizations working for the betterment of medical education. A committee of two consisting of Drs. W. J. Means and Fred C. Zapffe was appointed to meet with the National Confederation of State Boards of Examiners at Indianapolis on the 26th of April. Another committee of two was appointed consisting of President James of Kansas City and Dr. Zapffe to meet with the committee on Medical Colleges of American Medical Association at Chicago in May.

The association adjourned to meet in Pittsburg on the fourth Monday of April, 1906.

W. J. MEANS.

THE COLUMBUS MEDICAL JOURNAL.

A MONTHLY MAGAZINE OF MEDICINE AND SURGERY.

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MAY, 1905.

Editorial.

TREATMENT OF GASTRIC ULCER.

The subject of gastric ulcer is one of increasing interest both to the physician and surgeon. Special attention to diagnosis, together with improved methods, has thrown much light on the subject in the last few years. The difficult problem is to decide when medical treatment shall be abandoned and surgical treatment instituted. Like that of appendicitis a few years ago the problem seems to be to decide upon the best plan of treatment, and if operation is to be done to decide when it shall be performed.

There is a growing sentiment in favor of surgical intervention in all cases resistant to approved medical treatment, carried out for a reasonable length of time. Dr. Sears has recently given, in the *Boston Medical and Surgical Journal*, a brief analysis of the causes of peptic ulcer which have been under treatment at the Boston City Hospital, supplementing it by results secured in several other hospitals. Conclusions are drawn from a study of the one hundred and eighty-seven cases admitted to the Massachusetts Hospital for the ten years ending 1898, and one hundred and seventy-four cases, besides three hundred and sixty-three cases reported from other sources.

This study shows that the results secured from surgical treatment, which is usually upon the more difficult cases, are quite as good as those from medical treatment. About one-half of the cases believed to be cured by medical treatment remain well for a period of five years, while immediate results from operation in competent hands are almost the same. While surgery may be justly proud of its achievements, its true value cannot be fixed until it is better known whether it brings a still larger percentage of permanent cures.

The author submits the following conclusions: "(1) That the strongest argument so far presented in favor of the surgical over the medical treatment of peptic ulcer is the failure of the latter. (2) That the danger to the patient from operation in skilled hands is not greatly increased, the immediate results of both medical and surgical treatment being about the same. (3) That the future interest to the clinician lies, not in hearing of the prowess of the surgeon, recorded in long series of successful operations, but in learning their end results. Until they are known conservatism seems the proper course, but when medical treatment has failed, as shown by the recurrence of repeated small hemorrhages, or the persistence of other symptoms, a resort to operation is legitimate and justifiable. (4) That the surgical treatment of hemorrhage is of questionable utility, since in many cases it has continued, or first appeared, after operation, and in some, at least, of the successful ones it is doubtful if the operation had any influence for good. (5) That the interests of the patient will be best served, when doubt arises as to the advisability of operation, if the decision is not left to the physician or surgeon alone. Only by their cooperation will it be possible to avoid either the sacrifice of life from unnecessary delay or the performance of useless or even harmful operations."

MEDICAL ORGANIZATION IN OHIO.

I. STATE MEDICAL CONVENTION.

As we understand, the first state organization of the medical profession was that of the Ohio State Medical Convention. This association had a brief existence of twelve or fifteen years with, usually, triennial sessions. We cull from published reports the following account:

Pursuant to a resolution of a medical convention of physicians held in the city of Columbus on the 5th day of January, A. D. 1835, the following members of the medical profession assembled at the court room of the United States District Court in the said city of Columbus on Monday, January 1, A. D. 1838, to-wit: From the counties of Trumbull, Peter Allen and Ira G. Bronson; Portage, Daniel Upsom and F. W. Upsom; Fairfield, J. M. Biglow, L. Helmick, M. Z. Kreider, E. L. Miner, W. W. Talbott, L. Wolfley and A. Clarke; Franklin, Robert Thompson, J. B. Thompson, James Iron, N. M. Miller, W. M. Awl, S. Parsons, J. A. Waterman, P. Sisson, C. F. Schenck, Kingsly Ray, B. F. Gard, A. N. Boalse, E. Whitehead, Geo. Snow, James Robinson and Geo. Ritchie; Knox, Lyman Wright; Jefferson, W. J. Bates; Clarke, Robert Rogers and W. M. Murdock; Licking, H. Fassett, G. W. Landon, W. S. Richards and David Anderson; Muskingum, W. Morehead, A. M. Lewis; Guernsey, S. P. Hunt, Milton Greene, James Hood, Jas. M. Mitchell and J. F. Martin; Greene, Isaac S. Perkins; Montgomery, D. S. Gans; Hamilton, Daniel Drake, J. A. Wade, M. B. Wright and J. P. Kirtland; Warren, Elias Fisher; Ross, J. M. Brown, J. S. Putman and W. E. Thompson; Pickaway, P. K. Hall and B. S. Olds; Delaware, R. Hills, E. Corney, J. M. Roberts, C. S. Clark, B. Page and J. Longworth; Madison, C. Ankelen and Aguila Toland; Perry, W. Trevitt, David Chambers and B. Stone; Scioto, G. S. B. Hempstead; Cuyahoga, D. L. M. Peixotto; Logan, J. Ordway, Jas. Crew; Shelby, H. S. Conklin; Belmont, Thos. Carroll, E. Gartow and Isaac Hoover; Washington, S. P. Hildreth; Richland, J. P. Henderson; Lorain, E. M. Hubbard; Union, J. C. Norton; Morgan, T. Martin.

Dr. Peter Allen, president, 1835; Samuel P. Hildreth, president, January 1, 1838; S. P. Hildreth, president, Cleveland, second Tuesday in May, 1839.

"This convention, while it did not in its nature combine the elements of perpetuity, did, even in its infancy, originate and promote the establishment of the Ohio Lunatic Asylum and the School for the Education of the Blind, which will stand as perpetual monuments of the philanthropy and wisdom of the Ohio Medical Convention."

II. OHIO STATE MEDICAL SOCIETY.

The first meeting of the Ohio State Medical Society was held at the Neil House, Columbus, Ohio, Thursday evening, May 14, 1846. A number of medical gentlemen assembled and organized a meeting by the selection of G. W. Boerstler, chairman, and Jas. F. Hibberd, secretary. A central board of seven censors was appointed by the chairman to receive names of applicants and decide upon their qualifications for membership. The board consisted of Drs. F. Carter, J. P. Kirtland, J. W. Bigelow, J. F. Hibberd, E. H. Davis, J. J. McIlhenry and J. P. Judkins. The other members of the society were Drs. G. W. Boerstler, Wm. Trevitt, G. J. Sachse, H. Lathrop, D. A. Coy, R. Thompson, Jno. Butterfield, R. L. Howard, A. H. Baker, S. St. John, A. O. Lindsley, A. W. Thompson, R. Hills, W. R. Kable, David Williams, M. Z. Kreider, J. Thompson and S. M. Smith, making twenty-five members in all.

Presidents.	Place of Meeting.	Date of Meeting.
G W. Boerstler	Columbus, Ohio	May 14-15, 1846
G. W. Boerstler	Columbus, Ohio	May 18-19, 1847
R. Thompson	Columbus, Ohio	Jan. 11-12, 1848
R. Thompson	Columbus, Ohio	May 16-17, 1848
J. P. Kirtland	Columbus, Ohio	June 6-7, 1849
R. D. Mussey	Columbus, Ohio	June 5-6, 1850
W. W. Rickey	Columbus, Ohio	June 3-4, 1851
G. W. Boerstler	Columbus, Ohio	June 3-4, 1852
W. Judkins	Dayton, Ohio	June 7-8, 1853
Julius S. Taylor	Cincinnati, Ohio	June 6-7, 1854
Chas. W. Woodard	Zanesville, Ohio	June 5-6, 1855
G. S. B. Hempstead	Columbus, Ohio	June 3-4, 1856
Peter Allen	Sandusky, Ohio	June 2-3, 1857
Daniel Tildon	Massillon, Ohio	June 1-2, 1858
F. T. Harxthal	Columbus, Ohio	June 7-8, 1859
L. Firestone	White Sulphur Springs	June 12-14, 1860
H. S. Conklin	White Sulphur Springs	June 25-26, 1861
M. B. Wright	White Sulphur Springs	June 17-18, 1862
J. W. Russell	White Sulphur Springs	June 16-18, 1863
W. P. Kincard	White Sulphur Springs	June 21-22, 1864
G. C. Weber	White Sulphur Springs	June 20-21, 1865
B. S. Brown	White Sulphur Springs	July 19-21, 1866
J. W. Hamilton	Yellow Springs, Ohio	June 11-12, 1867
E. B. Slevin	Delaware, Ohio	June 3-4, 1868
Alex. Dunlap	Columbus, Ohio	June 8-10, 1869
S. M. Smith	Cleveland, Ohio	June 14-16, 1870
T. A. Reamy	Cincinnati, Ohio	April 4-6, 1871
W. W. Dawson	Portsmouth, Ohio	June 11-13, 1872
A. B. Jones	Columbus, Ohio	June 10-12, 1873
H. J. Herrick	Toledo, Ohio	June 16-18, 1874
W. W. Jones	Put-in-Bay, Ohio	June 15-17, 1875
E. Williams	Put-in-Bay, Ohio	June 20-22, 1876
W. J. Scott	Put-in-Bay, Ohio	June 12-14, 1877
W. H. Philips	Columbus, Ohio	May 14-16, 1878

Presidents.	Place of Meeting.	Date of Meeting.
B. B. Leonard	Dayton, Ohio	June 3-5, 1879
J. A. Murphy	Cleveland, Ohio	June 15-17, 1880
E. H. Hyatt	Columbus, Ohio	June 14-16, 1881
Starling Loving	Columbus, Ohio	June 13-15, 1882
Starling Loving	Cleveland, Ohio	June 5-7, 1883*
C. P. Landon	Columbus, Ohio	June 10-12, 1884
J. C. Reeves	Dayton, Ohio	June 3-5, 1885
Wm. M. Beach	Akron, Ohio	June 2-4, 1886
T. McEbright	Toledo, Ohio	June 15-17, 1887
S. F. Forbes	Columbus, Ohio	June 13-15, 1888
P. S. Conner	Youngstown, Ohio	May 22-24, 1889
John McGurdy	Columbus, Ohio	June 4-6, 1890
W. J. Conklin	Sandusky, Ohio	June 17-19, 1891
C. A. Callamore	Cincinnati, Ohio	May 4-6, 1892
D. P. Allen	Put-in-Bay, Ohio	June 28-30, 1893
N. P. Dandridge	Zanesville, Ohio	May 16-18, 1894
D. N. Kinsman	Columbus, Ohio	May 15-17, 1895
Dan Millikin	Columbus, Ohio	May 27-29, 1896
F. C. Larimore	Cleveland, Ohio	May 19-21, 1897
W. H. Hummiston	Columbus, Ohio	May 4-6, 1898
N. R. Coleman	Springfield, Ohio	May 10-12, 1899
R. B. Hall	Columbus, Ohio	May 9-11, 1900
F. D. Bain	Cincinnati, Ohio	May 8-10, 1901
E. C. Brush	Toledo, Ohio	May 28-30, 1902

III. OHIO STATE MEDICAL ASSOCIATION.

At the Toledo meeting a new constitution was adopted and the name of the organization changed to that of the Ohio State Medical Association, the purpose of which is, as stated in the constitution, "to federate and bring into one compact organization the entire medical profession of the state of Ohio, and to unite with similar associations in other states to form the American Medical Association; with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

New life and interest were manifested at this meeting and the membership increased to 2202. The first board of councilors consisted of Brooks F. Beebe, Harry H. Jacobs, Horace Bonner, J. C. M. Floyd, Frank D. Bain, E. C. Brush, Julius H. Jacobson, John E. Sylvester, Thomas Charles Martin and T. W. Rankin.

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* The Society held no sessions on account of the meeting of the A. M. A. at Cleveland that year.

The presidents since the reorganization have been:

Presidents.	Place of Meeting.	Date of Meeting.
W. C. Chapman	Dayton, Ohio	Jan. 5-7, 1903
C. S. Hamilton	Cleveland, Ohio	May 18-20, 1904
S. S. Halderman	Columbus, Ohio	May 10-12, 1905

CONFEDERATION OF RECIPROCATING BOARDS.

Confederation of members of Reciprocating State Medical Examining and Licensing Boards, which now includes fourteen of the middle and western states, met at Indianapolis April 26. The Association transacted business of more than usual interest; two important measures bearing upon medical education were adopted. One of these was the adoption of the curriculum provided by the Association of American Medical Colleges published elsewhere in this issue, and the other the adoption of the Medical College Association standard for advanced standing, i. e., "No advanced standing shall be given in any medical college except to graduates of literary colleges whose course has included sciences equivalent to those in the first medical year; and this advanced standing shall be granted only on the certificate of certified state examiners appointed by the several State Boards of Medical Registration and Examination."

We regard this as a most important step in promoting medical education. The Ohio State Board has had under consideration, for some time, an amendment to its rules quite similar to the above, identical in reference to the condition of advanced standing except that it did not provide that the advanced standing should be given only under authority of the State Board. The latter proposition is an important one to give efficiency to the measure, for if left to the medical colleges themselves, without some means of enforcing it by the Licensing Boards, the rule would become a dead letter. This is a measure for which we have contended for the past two years and we are glad that the Confederation of State Medical Boards has decided to effectually enforce it. The significance of these important measures is hard to over-estimate. Their adoption by these important boards and the extension of reciprocity, as shown by the growth of the latter association, are signs of better times for the medical profession.

STATE EXAMINERS AND MEDICAL COLLEGES.

We have at different times referred with pleasure to the excellent work accomplished by the Ohio Board of Medical Registration and Examination. Probably no state board has done more to elevate professional and educational standards, to harmonize the profession and prevent the illegal practice of medicine, than the Ohio Board. The high standing of the individual members of the board has done much to commend it and make further progress in the same lines not only possible but almost certain. We have no word of criticism for any member of the board, and while we believe that men connected with medical colleges are especially fitted to discharge the duties of membership on the board, yet we believe that the interests of the profession as a whole will be best served by having the board composed of persons not connected with medical colleges. While medical teachers have been foremost in promoting medical legislation, it is a well recognized fact that the interests of medical education in the several states have been greatly advanced by having the entrance as well as the licensing examinations conducted by a board whose members are in no way connected with medical colleges. A former member of the board set, as we believe, an excellent example when, on receiving appointment on the board, he severed all connection from the college with which he had previously been identified, and another distinguished medical teacher while serving on the board held aloof from college work. Barring the statutory requirement the argument against having the entrance examination conducted by men connected with medical colleges obtains with equal force against having licensing examinations held by physicians in any way connected with these institutions.

A LIFE OF REAL BENEVOLENCE.

Several years ago when we had occasion to inquire into the education of mentally defective children, and had directed our quest for information to the appropriate department of the University of Chicago, we were informed that the best solution of this problem had been reached in Columbus in the School for Feeble Minded Youth, through the genius of its superintendent, Dr. Gustavus A. Doren. By general consent it was asserted that Dr. Doren's achievements were regarded by experts in and out of America as the model in practical education for the mentally inept. Our steps were retraced to Columbus, and in the course of an afternoon's observation with Dr. Doren's guidance, the truly marvelous results accomplished by this remarkable man and his devoted wife in turning to productive activity the latent talents of imbeciles and idiots, were witnessed. It was indeed "applied sloyd" exemplified by the inmates of the institution who were engaged in various lines of productive farming, road and pavement making, repairs, improvements, and the actual construction of splendid fire-proof buildings. The hum of industry and air of contentment pervaded this community of society's unfortunates.

Now the organizing and presiding spirit of this splendid achievement is no more. He who unselfishly, unceasingly, and with his whole soul gave his life's energies to the task of creating in Ohio a world-famous establishment for the care of the feeble minded expires in the field of his labors. But as he was honored, respected and appreciated abroad during his life time, so Dr. G. A. Doren should now be recognized as one of Ohio's heroic sons; his name should conspicuously adorn the roll of honor in the list of Ohio physicians who by self-sacrifice have advanced the public welfare. *

EDUCATIONAL COMMITTEE ON TUBERCULOSIS.

The District Nurses' Association of this city is taking an active interest in caring for tuberculous patients throughout the city, and of furnishing instruction to every household in which there are persons afflicted with tuberculosis; and also in educating the public as to effective measures of preventing this dread disease. Their example may well be imitated by similar organizations in other cities. They have solicited a number of physicians to act as an educational committee in furthering the object of the association. It is the purpose of this committee to provide, if possible, lectures on this subject, to be given in the churches of the city, to the school teachers at their monthly meetings, and to workingmen's organizations, literary associations and clubs, and wherever "ready-made" audiences can be secured; and also, "to print and judiciously distribute appropriate circulars concerning the prevention of tuberculosis; to prepare for the press articles for the instruction of the public and accounts of the work of the various committees of the tuberculosis society or committee; to prepare for the committee on workshops and factories a sign, prohibiting spitting, to be posted in such places; and to endeavor to arouse the public to the necessity for enforcing the ordinance against promiscuous spitting."

Obituary.

THEODORE F. DAVIDSON, M. D.

Dr. Theodore F. Davidson was born in Greenup, Kentucky, September 4, 1845, and died of organic heart disease at his home in this city, March 22, 1905.

He was educated in the common schools, and professionally in the Cincinnati College of Medicine and Surgery, from which institution he was graduated in 1870. After studying medicine with Dr. Samuel Ellis of his native town he began the practice of his profession at Liberty, Indiana. In 1872 he removed to Portsmouth, where most of his professional life was spent. In 1898 he came to Columbus. He was, for a time, one of the physicians of the Columbus Hospital for Women, and later chief of staff of Mercy Hospital.

Dr. Davidson was married in 1866 to Annie E. Ware; he is survived by his wife and six children. He was a member of the Broad Street M. E. Church of this city and "held high places" in the Odd Fellows, Patriarch Militant and the Order of United Workmen.

Medical News Notes.

Dr. William Osler leaves for England about the middle of May.

Dr. C. A. Dunlap of McArthur has been appointed resident physician at the Rodebaugh Sanitarium.

Dinner to Dr. Osler.—A farewell dinner to Dr. William Osler was given at the Waldorf-Astoria, New York, on May 2.

Drs. H. B. Blystone, G. T. Meek, W. H. Cole and G. H. Schauweker have been reappointed by the board of health as district physicians for the ensuing year.

The Ohio State Pediatric Society will meet at the Great Southern Hotel, May 9, D. V. Cofran, president. An interesting program has been provided which includes a special address by Dr. A. C. Cotton of Chicago.

We were indebted to the Journal of The American Medical Association for the portrait of Dr. T. Gaillard Thomas, published in our March issue. By some inadvertence we failed to make this acknowledgment at the time of its appearance.

It is reported that the New York Eye and Ear Hospital is to have a new $600,000 structure put up in East 64th street. There will be a frontage of 118 feet and a depth of 100 feet, with two wings fitted with sun parlors at each of the nine stories.

Dr. Lewellyn F. Barker, Professor of Anatomy at the University of Chicago, has been recently appointed Professor of Medicine at Johns Hopkins University, vice William Osler, resigned. Dr. Thayer, formerly Dr. Osler's assistant, has been promoted to the chair of Clinical Medicine.

Dr. W. J. Means, President of the Judicial Council of the American Association of Medical Colleges, attended the meeting of that organization at Chicago April 10, and as a delegate of the same association he attended the Indianapolis meeting, April 26, of the American Confederation of Reciprocating Examining and Licensing Medical Boards.

The Ohio State Board of Medical Registration and Examination consists at present of John K. Scudder of Cincinnati (term expiring 1905); S. B. McGavran, of Cadiz (1906); S. Sherman, of Columbus, (1907); A. Ravogli, of Cincinnati, (1908); H. E. Beebe, of Sidney, (1909); E. J. Wilson, of Columbus, (1910); H. H. Baxter, of Cleveland, (1911).

Among those mentioned as possible successors of the late Dr. G. A. Doren, as superintendent of the State Institution for Feeble Minded Youth, are Drs. E. H. Rorich, superintendent of the Athens State Hospital; A. H. Shepard, superintendent of the Dayton State Hospital; H. O. Collins of Dayton, W. D. Deuschle of this city and H. C. Eyeman, superintendent of the Massillon State Hospital.

CINCINNATI ACADEMY OF MEDICINE.—At the recent annual meeting of the Cincinnati Academy of Medicine the following officers were elected: President, Dr. Magnus A. Tate; First Vicepresident, Dr. Robert Carothers; Second Vicepresident, Dr. Alfred Gaither; Secretary, Dr. Stephen E. Cone; Treasurer, Dr. A. G. Druty; Trustee, for three years, Dr. Arch I. Carson, and Censor, Dr. Gustave E. Zinke.

SPECIAL TRAINS TO PORTLAND MEETING.—The Northern Pacific Railway will, as we understand, run three solid special trains through to the Pacific coast for physicians who go west early in July to attend the coming session of the American Medical Association; the first leaving Chicago June 30 and reaching St. Paul July 1, stopping for a five days tour of the Yellow Stone National Park. The second special train will leave Chicago July 1, reaching St. Paul July 2, with privilege of a similar tour of Yellow Stone Park. A third special train will leave Chicago July 6, running through to Portland, with stops at several important points.

"The Northern Pacific has been designated the official route for the handling of the physicians, and the national officers will go west on one of the first two specials. Each special will be made up of standard Pullman equipment, with through dining cars and ample baggage accommodations. Every facility which adds to luxurious comfort en route is being arranged for and the train schedules have been worked out with especial reference to the convenience of the physicians. The third special will arrive in Portland the morning before the convention opens.

"Berth reservations should be made immediately through C. A. Mathews, General Agent Passenger Department, N. P. R., Chicago."

SPECIAL MEETING OF THE COLUMBUS ACADEMY OF MEDICINE.—The Columbus Academy of Medicine held a special meeting in April, at which Dr. H. C. Wood, Jr., guest of honor, delivered an address on "Proprietary Preparations." The address was directed chiefly toward the abuses of nostrums rather than to a consideration of the synthetic preparations. He pointed out the extent to which such remedies were used and expressed fear that the excessive use of such preparations is militating against rational thereapeutics, and that prescription writing would become a lost art. He urged the profession to refuse to prescribe preparations based on secret or semi-secret formula. The medical journals came in for a full share of criticism for subsidizing their pages in the interests of these preparations. "The remedy," he said, "was for the profession to prescribe official preparations of known physiologic and therapeutic action."

Remarkes expressive of appreciation of the paper were made by Drs. E. B. Fullerton and T. W. Rankin.

A banquet was served at the Hartman Hotel, about one hundred physicians being present, Dr. F. F. Lawrence acting as toastmaster. Following the banquet interesting addresses were made by Drs. D. N. Kinsman on "The Old Way"; J. W. Clemmer, on "Sectarianism"; J. H. J. Upham, on "The Young Man in Medicine," and H. C. Wood, Jr., on "What of the Future."

Recent Medical Books.

PROGRESSIVE MEDICINE, Vol. IV, December, 1904; Vol. I, March, 1905. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octova, 374 pages, 79 illustrations. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00; carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

The December issue of Progressive Medicine closed the final installment of this quarterly digest for the year 1904. It contained a series of essays on Diseases of the Digestive and Genito-Urinary tracts, on the Surgery of the Extremities and a Practical Therapeutic Referendum. It thus completes as far as has been possible the comprehensive and critical survey of the periodical literature of medicine for the year 1904.

The first number for 1905 treats of a variety of subjects—Surgery of the Head and Neck, the Thorax, Acute Infectious Diseases and Diseases of Certain of the Organs of Special Sense—on the plan which has from its conception been the characteristic feature of the series. Progressive Medicine presents to the profession a continuous, connected and readable form of the actual advances. It indicates the line of future labor and progress; it condemns what is faulty and mistakes—and so gives to the practitioner a firm and self-reliant grip on the movements of the day.

The make-up of these volumes, in print and binding, fit them to be a permanent part of every library.

CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS. A Practical Treatise on the Diseases of Women and Their Treatment by Electricity. By G. Betton Massey, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and Ex-President of the American Electro-Therapeutic Association; Member of the Societe Francaise d'Electro-Therapie, American Medical Association, etc. Fourth Edition, Revised, Rewritten and Greatly Enlarged. Illustrated with Twelve (12) Original, Full-page Chromo-lithographic Plates; Twelve (12) Full-Page Half-tone Plates of Photographs taken from Nature, and 157 Half-tone and Photo-Engravings in the Text. Pages XVI-468. Royal Octavo. Extra Cloth, Beveled Edges. Price, $4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia.

The application of electricity in the treatment of diseases of women is an interesting subject and a work of this character will be welcomed by the general practitioner.

The author does not claim to cover the field on Diseases of Women occupied by the works on abdominal and pelvic surgery, but to cover the ground of more value to the average physician and his patients than books devoted to the details of operations that however necessary at times are often only of service as last resorts, and are then incapable of application except at hands that have had more than a book training.

To physicians who are interested in the treatment of Diseases of Women this book will be of very great value.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. For Students and Practitioners. By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Author of A Text-Book of Practical Therapeutics; A Text-Book of Practical Diagnosis, etc. In one very handsome octavo volume of 1120 pages, with 129 engravings and 10 full-page plates in colors and monochrome. Cloth, $5.00, net; leather, $6.00, net; half morocco, $6.50, net. Lea Brothers & Co., Philadelphia and New York, 1905.

As the student of today is the physician of the future, and as the physician must always be a student, a single volume can be conceived as answering the requirements both of a text-book and work of reference. This volume embodies the experience of more than twenty years of active hospital and private practice, during which time the author has been constantly teaching Clinical Medicine and Thearpeutics. Dr. Hare possesses to an unrivalled degree the ability to grasp the essence of a subject and to present it clearly. He also understands how to select just those points concerning which the practitioner is likely to seek for information. These characteristics are notable in his previous works, especially in the Practical Diagnosis and Practical Therapeutics. Five large editions of the former in nine years, and ten still larger editions of the latter in fifteen years, testify to the appreciation which has been bestowed on them wherever English is read. The author's long training has enabled him to appreciate and overcome the student's difficulties, and his equal experience in practice has qualified him with ripened judgment to solve the everyday perplexities of the physician. Throughout the work the author has dealt with medicine as a practical science, and has given prominence to those aspects which bear directly on human needs. The sections on diagnosis and treatment have accordingly been developed with special fulness and detail, the therapeutical recommendations being given in such a way that they may be readily applied. Illustrations and plates have been introduced wherever an important point could be made clearer than by verbal description alone.

INTERNATIONAL CLINICS, a quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatricts, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, Pa., with collaborators. Volume I, 15th Series, 1905. Publishers, J. B. Lippincott Company, Philadelphia, Pa.

Volume I of the Fifteenth Series for 1905 of this valuable quarterly contains several interesting articles from noted physicians on treatment of Medicine, Surgery, Neurology and Obstetrics. There is also a valuable regime of the latest literature compiled by A. A. Stevens, A. A., M. D., Lecturer on Physical Diagnosis in University of Pennsylvania.

THE INTERNATIONAL MEDICAL ANNUAL. A year book of treatment and practitioner's index, 1905, twenty-third year. Publishers, E. B. Treat & Co., 241 West 23rd street. Price, $3.00.

The Medical Annual, covering the progress of medical science during 1904, is at hand. It needs no introduction. A work that has stood the test of almost a quarter of a century presents so much of merit that it is only necessary to announce its publication. As a work for rapid reference it is most valuable.

THE COLUMBUS MEDICAL JOURNAL.

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FRACTURES AT AND NEAR THE ELBOW JOINT.

BY J. B. MURFREE, M. D., MURFREESBORO, TENN.

Fractures at and near the elbow joint form an important class of injuries with which we have to deal, and from their frequent occurrence, the importance of the injuries, and also from the permanent disability which sometimes results. They are of frequent occurrence, are painful in their existence, often difficult to diagnose and the result of treatment is sometimes bad, entailing upon the patient a deformity with impaired function of the joint. The frequency of these fractures and the difficulty often experienced in making a correct diagnosis of the seat and extent of the injury, coupled with the fact that their treatment is sometimes unsatisfactory, and that, even after the best treatment, the injury results in a deformity and a stiffened joint, make their study a matter of no small interest to the general practitioner. Fractures at the elbow joint are more frequently followed by deformity, or impairment of function of the joint than fractures in any other part of the body. A glance at the skeleton at once shows us the complex character of the elbow joint. The study of the anatomy of the part reveals the fact that we have three bones with important relations to this joint, the humerus, the ulna and the radius. While the radius does not completely articulate with the humerus, yet the external condyle forms a slight union with that bone and also the head of the radius forms a union with the ulna, through the lesser sigmoid cavity. While the humerus and ulna together form the elbow joint, yet the upper extremity of the ulna

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* Read before the Tri-State Medical Society, at Chattanooga, Tenn., October 14, 1904.

projects an inch or an inch and a half beyond the articulation, forming the olecranon process, which acts as a key to prevent over-extension of the arm. This joint has no prototype in the human skeleton. It is a ginglymoid or hinge-joint, and has no movements except those of flexion and extension. There is, however, a rotary movement of the radius, which gives the power of supination and pronation to the forearm. The elbow joint performs a most useful function, being essential to the well-being of the individual, yet being so exposed it is subject to many and varied injuries, not the least of which are fractures of one or more of the bones which enter into its formation.

Fractures at or near the elbow joint include fractures of the lower end of the humerus, and the upper ends of the ulna and radius. Those of the lower end of the humerus have been classified into supracondyloid, intercondyloid, fractures of the epicondyle, fracture of the condyles. Those of the ulna and radius are fracture of the olecranon process and fractures of the head of the ulna and radius. Fractures at the lower end of the humerus embrace a number of varieties which differ materially from each other, in importance and character; yet having in common their location near the elbow, there is a difficulty in diagnosing them, from each other, and also from dislocation. They are of frequent occurrence, especially in childhood, and are caused by direct violence as in falls or blows received upon the elbow, and also by indirect violence, as in falls upon the outstretched hand.

In the supracondyloid fracture the line of fracture may extend transversely or obliquely above the condyles, or through epiphyseal line, in young subjects; sometimes, though rarely, the fracture extends into the elbow joint.

The cause, as stated, is external violence, either directly or indirectly applied; most generally, it is the result of violence indirectly applied, as by a fall upon the hand, or by torsion. Most usually by a fall upon the outstretched hand, the force of the fall is transmitted to the bones of the forearm, which are forced backward, causing the force of the fall to be expended upon the lower end of the humerus, which gives way and is pressed backward by the partly flexed forearm, or rarely by overextension of the joint. In this instance, the line of fracture is oblique from behind, downward and forwards. When the force of the violence acts from behind forward against the back of the elbow, the displacement is reversed and we have the lower end of the humerus forced forward (a flexion fracture), the line of fracture extending from the anterior part of the bone, obliquely downward and backward, the sharp point of the upper end of the lower fragment projects in front. In supracondyloid fractures the line of fracture may be transverse or oblique, and if oblique may be from before backward or from side to side and may extend into the joint. The displacement varies in character and extent with the line of fracture. The line of fracture is more commonly obliquely downward and forward, the lower fragment being carried backward and upward and often the lower end of the upper fragment is forced through the skin and muscle on the anterior surface, constituting a compound-fracture. An angular displacement may be added or substituted for the backward with the apex directed forward.

In the rarer forms of these fractures in which the obliquity is downward and backward, the displacement of the lower fragment is forward and upward, the deformity being less marked. Sometimes, however, the end of the upper fragment is driven through the soft tissues at the back of the elbow, and an artery or nerve may be torn or compressed.

The symptoms of this fracture are usually well marked. We have pain, loss of function, deformity, abnormal mobility, and crepitus. The deformity is usually well marked, especially so when the line of fracture is oblique downward and forward, in which case the lower fragment is driven backward and in appearance the injury very much resembles a backward dislocation of the elbow joint; the diagnosis is to be made by noticing the relation of the condyles of the humerus to the olecranon process, and the relation of the head of the radius to the ulna in front of the external condyle.

Abnormal mobility both in abduction and adduction is readily manifested, usually with crepitation. The fracture is sometimes made compound by the sharp end of either fragment, especially the upper one, perforating the skin. And sometimes complicated by injury to the brachial artery or the median nerve.

The indications for treatment are to reduce the fractured bones to secure perfect coaptation of the fragments and to maintain them in their position: as there is a tendency to over-riding and angular displacement resulting in a deformed limb with impaired functions.

The reduction of the fracture is usually not difficult and generally they can be readily retained in their position. An anterior and posterior angular splint extending from the shoulder to the wrist neatly and firmly bandaged to the arm, while the forearm is flexed at a right angle, is the only dressing needed. Internal and external angular splints are to be condemned as they allow the lower fragment to project too far forward, producing a deformity.

But the better dressing is the encasement of the arm from the shoulder to the wrist in a moulded splint of plaster of paris, felt, leather or pasteboard: the plaster is preferable. It should be so applied that the edges may come well up on the arm and the forearm should be flexed at a right angle, while the arm is supported in a sling at the wrist and not at the elbow. Frequent inspection will be required and sometimes readjustment of the dressing. The dressing should be worn for four weeks, after which the arm should be carried in a sling for two weeks.

Fracture of the internal epicondyle orepitrochlea sometimes takes place from direct violence, but more frequently accompanies a dislocation of the elbow, being produced by the contracting force of the flexor muscles of the forearm, which are attached to it. It is more common in children than in adults. It is to be diagnosed by feeling the little bone with the fingers and moving it against the humerus, which is apt to elicit crepitation. The fracture of the external epicondyle is almost always the result of external violence and is recognized by discovering the movable fragment, but usually there is so much injury to the soft parts that the fragment cannot be satisfactorily recognized. The only treatment necessary for either of these fractures is to immobilize the elbow in a fixed position for a few weeks.

Fracture of either condyle of the humerus is the result of external violence directly applied. In fracture of the internal condyle which is the more frequent of the two, the line of fracture extends from the inner surface of the humerus downward and outward into the joint. The displacement is upward and is usually slight; it is increased by pressure upon the ulna, while the arm is flexed.

The reduction is usually easily effected by manipulation and the fracture is treated by a posterior rectangular splint of tin or of moulded plaster of paris.

Immobilization is maintained for three weeks, atter which the arm is carried in a sling for two weeks, without using any passive motion. In fracture of the external condyle the line of fracture extends from a point at the beginning of the supinator ridge downward and inward to the outer part of the trochlea. The displacement is slight, except when there is a simultaneous displacement of the ulna from the internal condyle outward and backward. In the young sometimes the lower fragment is displaced downward and if not corrected results in what is termed a gunstock deformity. The treatment is, by reducing the fragment, immobilizing the arm at a right angle and maintaining it in that position for four weeks.

Intercondyloid fracture, or T-shaped fracture, differs from the supracondyloid by the addition of a line of fracture running directly down into the joint between the condyle, usually separating these processes. The cause is usually great external violence directly applied as in a fall or a blow upon the elbow,—they are often comminuted and complicated. They resemble the supracondyloid fracture. The condyles either preserving their relation with each other or being widely separated and the lower end of the upper fragment or the olecranon processes is interposed between them. The treatment is by complete reduction of the fragments, which is often difficult, and an anesthetic is required to be successful.

It is usual for the movements of the joint to be somewhat restricted after recovery has taken place; therefore the limb should be placed in that position which will be most useful to the individual should anchylosis occur. A broad posterior molded splint running from the shoulder to the wrist and coming well around to the front of the arm is the best dressing. This splint is best made of plaster of paris. After two weeks the arm should be inspected and passive motion instituted.

Fracture of the olecranon process is the result of external violence applied directly to the process or upon the ulna near its end; the line of fracture may be in the long axis of the bone at right angle or oblique in either direction. The displacement varies greatly, being either very slight, the periosteum being but slightly torn, or it may be very great, the fragment being drawn up one or two inches by the triceps muscle. The symptoms are, pain on pressure and on active extension of the limb. When there is a slight separation there will be independent motion of the fragment and crepitation. When the displacement is great, the olecranon process will be absent from its natural position and can be felt at a higher point, creating a decided sink between the fragments. The chief indication in the treatment is to reduce the fragments and maintain them in direct apposition.

When there is but slight separation and the olecranon process follows the ulna, inflexion of the arm, the proper treatment is to immobilize the arm at a right angle by an internal and external angular splint, but when the displacement is very great and the upper fragment detached and drawn upward, the elbow must be made immovable in full extension by a long anterior splint, the fragment being held down by an adhesive strip in the shape of the letter U.

Sometimes the fragments can be wired together through an incision made in the injury by the surgeon, and in old and neglected cases this is the proper treatment.

The separation of the epiphysis is a rare accident and is generally found in children who have been thoughtlessly raised up by the hands. The diagnosis is evident and the treatment is by immobilization of the arm at a right angle.

Fracture of the coronoid process of the ulna is almost unknown except as a complication of dislocation. There is but little tendency to displacement of the fragment, as the brachial anticus muscle is the only one attached to the coronoid process, and it is also broadly attached to the ulna below. The fragment can sometimes be felt as a movable body. The treatment is by immobilizing the arm in a flexed position.

Fracture of the head of the radius has been observed mainly in connection with fracture of the coronoid process of the ulna.

Fractures of the neck of the radius are very rare, yet when they do occur they are liable to be followed by suppuration or bony union of the joint. Removal of the head of the radius bv an open incision is the treatment in order to avoid anchylosis.

The diagnosis and treatment of fractures at or near the elbow joint is of the utmost importance, from the fact that an error in diagnosis, or an unskillful treatment will very likely result in a stiffened joint which may maim the patient for life. The examination should always be very careful and painstaking and if the injury is not clearly revealed the patient should be thoroughly anesthetized and then the examination made thorough. Here the X-rays are of immense service and should be utilized in all doubtful cases.

In my own opinion all fractures of the elbow joint are of such importance as to demand an accurate diagnosis; therefore I would in every case insist upon an anesthetic being given. I believe it is essential to a correct diagnosis. Moulded splints made of plaster of paris, heavy pasteboard, felt, or leather are to be preferred in the dressing of fractures at the elbow; the best of these is the plaster of paris. They can be accurately applied to the parts and a perfect fit can be secured. They are soft and do not irritate the skin as wood or metal splints do. When once applied and hardened they are easier of removal and reapplication.

In the treatment of fractures at the elbow joint we should be careful to only allow the hand to rest in the sling, and never the whole forearm. We need the weight of the elbow to produce traction upon the lower fragment. If the sling is applied to the elbow it tends to press the flexed elbow upward, changing the transverse axis of the joint by the ascent of the internal condyle which adducts the forearm, thereby producing the gunstock deformity. Complete extension of the arm is recommended by some, but the objection to this mode is that it requires the patient to lie in bed which soon becomes irksome, and if anchylosis should occur the arm is practically useless. The splints should be worn from three to six weeks, owing to the age of the patient. A longer time is required in the supra and intercondyloid fractures than in the others.

When the splints are removed the elbow is usually stiff, but in time this generally passes off. The adhesion should not be forcibly broken up. But the patient should be encouraged to make as much use of the limb as possible and usually after varying time the stiffness will disappear and the range of motion will be increased to the normal or almost normal.

THE MEDICAL STUDY AND CARE OF INEBRIETY.*

BY T. D. CROTHERS, M. D.,
Superintendent Walnut Lodge Hospital, Hartford, Ct.

(Continued from April issue.)

I have used for several years the electric radiant light bath, which is simply a room with tin or glass reflectors over which is strung a large number of incandescents, and arranged so as to focus their light on the naked body. The chemical rays of light penetrating deeply into the tissue, produce intense perspiration and activity of the surface blood vessels. This is practically the most powerful eliminator we have, and its effects are more satisfactory than hot air or warm water. After the bath, salines for purgation, and mineral waters which have some tonic and eliminative action, become useful.

The removal of spirits should be done at once to uncover any masked conditions that might possibly be present. The danger of collapse, or the development of delirium by the sudden withdrawal of spirits is largely mythical, although the delusion is still retained in the text books that delirium tremens follows the sudden withdrawal of spirits.

The supposed collapse, or practically irritation and nerve disturbances is readily overcome by a great variety of means, prominent of which are hydropathic and eliminative measures. The bromide of sodium is one of the few effective sedatives, nux vomica and solutions of quassia are safe and excellent remedies. Baths, salines, massage, muscular vibration, and the static currents are the chief remedies used to great advantage.

Where there's a history of specific poisoning, mercury, arsenic and iodines should be used. Where there is a history of head injuries with shocks, both physical and psychical, forced rest with a total change of surroundings and habits of living are essential. If the patient is neuro-psychopath by heredity, the plan of treatment should vary somewhat.

A certain number of these persons have from the beginning an overwhelming impulse for the sedative effects of spirit or drugs, and when not using spirits or narcotic drugs, complain constantly of conditions of debility for which they seek relief filled with fears of suffering and death, with little or no pain resisting vigor. They are morbidly active to obtain relief from real or imaginary troubles. Where such persons use alcohol at the table and later become inebriates, the future restoration is more difficult.

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* Read at the Columbus Academy of Medicine, November 21, 1904.

Unfortunately, the theory of the tonic and stimulative action of alcohol is still urged in some circles. Thus, in a recent book on diseases of children, the author advises brandy as a tonic in debility and anemia. In a few text books the tonic remedial power of alcohol is still urged.

In the study of a large number of inebriates the fatal error of such advice is apparent. Thus, a weak child from neurotic ancestors is given spirits as a medicine, and is literally made an inebriate, although the development of the disease may appear later. States of nerve exhaustion and defective nutrition treated by alcohol or narcotic drugs frequently end in the same way. When these facts appear in the clinical history, the prognosis and treatment is often a serious matter, requiring the most radical change of surroundings and methods of living.

Among the many problems that confront onefrom a knowledge of the early causes, that of mental treatment is often very important. In a certain number of persons mental contagion from bad company, bad social surroundings, and bad ideas and examples are found to be active causes.

Undoubtedly, all such persons possess a faulty nerve control and unstable brain condition, sensitive to every change of surroundings, with feeble reasoning to appreciate the relation of events. Often there is a faulty heredity with bad nutrition, with over training as well as under training.

Such persons lack in personality. They are mere copies of the surroundings and individualities of those who come in contact with them. They are mental dependents and defects. Alcohol or other narcotics are grateful in covering up the faults and weakness of this personality of the nervous system.

The treatment of persons of this class calls for many complex means and measures. One of the most interesting classes of inebriates that appeal for help are the periodic cases. In such persons the abnormal craze and insane drink thirst gathers and concentrates on the nerve centers in such intensity that only alcohol or other narcotics can satisfy it.

When this impulse dies out, the system appears to regain its former condition, and abstinence with intense disgust for spirits pervades the system for a fixed time. Then these nerve storms gather and break again. This resembles more nearly the epileptoid states, and in many instances it may be literally called "alcoholic epilepsy," in which the paroxysm is merely a morbid impulse and desire for spirits.

When these crazes appear at irregular intervals it is often possible to trace them to some exciting causes, which if understood, may be neutralized and controlled, but where they appear at distinct intervals, the medical problem is a very serious one.

We are all familiar with the irregular, periodical drink storms, which unfortunately can be seen in nearly every circle of life, but the persons who drink at definite periods are concealed and are not well known.

I have published several very interesting studies of inebriates whose drink storms returned at intervals of months or years with as much certainty as the changes of day and night.

Thus, in one case a noted lawyer drinks every two hundred days, another sixty days, another everv twelve months. In each of these cases total abstinence with no desire for spirits or thought of them, appears up to within an hour or two of the paproxysm. Then all at once, like a cloud in a clear sky, the impulse for drink literally overwhelms them, and will not be satisfied until it is gratified.

Many such persons realizing the impetuous demands of this impulse, disappear from home, and secret themselves in some place where the storm can expend itself without publicity until it is exhausted. In all the large centers examples of this class can be found, generally among the active workers, who at intervals disappear, returning in a week or more, coming under the care of the physician for nervous exhaustion and other troubles.

I always have a number of persons of this class under my care. Some of them recognize these attacks, and come in advance for treatment to avert them. Others are brought in the middle of the paroxysm and quickly recover.

A most interesting case which attracted a great deal of attention was that of a wealthy manufacturer, who every four months, or one hundred and twenty-four or five days, drank to great excess, and became homicidal and dangerous. After committing many assaults and being punished for them, it was ascertained that opium given a few days before the paroxysm would control it. After the disappearance of the paroxysm the opium could not be abandoned, and the question of continuing the use of opium was finally decided in its favor as the least of the two evils.

Another interesting class of periodic drinkers are those who use spirits only on great occasions, such as holidays, or days for the celebration of noted events. Such persons appear in institutions after the 4th of July, Christmas and New Years, or an exciting election. After a few weeks of rest they recover and remain sober until the next public occasion or celebration.

Quite a number of persons receive most efficient care from the family physician at these periods, and are practically saved from acute attacks by the use of eliminative and corrective measures combined in proper surroundings.

I have noticed that a large number of persons engaged in absorbing business, who eat irregularly and large quantities of meat, are subject to these paroxysms. Such persons suddenly disappear, going to the seashore, to the mountains, apparently to hunt or fish, giving insignificant reasons for their absence, and after a week or more on returning they appear very pale and exhausted. If the family physician is able to recognize the condition, and secures the confidence of his patient, the most happy results follow.

Probably in these cases there is a gathering of nerve energy, an accumulation of toxines and other poisons, lowering the vitality, and impairing the power of reason for the time. Undoubtedly there is present a variety of physical causes which should be recognized and removed.

A number of persons have been reported where the expulsion of tape worms from the system was followed by a complete recovery from the craze of drink. Several instances have been reported where on the removal of necrosed bones and other active causes or irritation, all desire for spirits disappeared.

Persons who use spirits continually in fairly good surroundings and who otherwise would seem to be in normal condition, should be suspected of suffering from the action of some specific causes, which not only lower the vitality, but keep up a condition of irritation of the nerve centers. Occupations and atmospheric conditions either at the sea shore or on mountain tops frequently act as exciting causes.

Professional men, clerks, merchants, bookkeepers, or other persons whose work requires physical or mental concentration of energy, by a change of occupation, are frequently able to overcome inebriety and live a rational, temperate life.

Persons living in high altitudes who go down to the sea levels, are able to give up all use of spirits, and persons who live at sea level can abstain on mountain tops. This suggests the presence and influence of unknown laws.

There is no doubt a wide range of causes which seem to depend on the pressure of the atmosphere, also on heat and cold, and the presence or absence of oxygen. These causes concentrate on the nerve centers and produce physical and psychical exhaustion which demand relief, and when alcohol or drugs are found to act in this way, they are called for with great impulsiveness. The continuous use of spirits and narcotics, not only intensifies these conditions, but produces other and more serious neuron changes.

There can be no doubt that suggestion plays an active part, not only in the mentally contagious, but to a large number of emotionally, unstable and unreasoning people. Some books of literature have extolled the use of spirits and opium, investing it with a mysterious fascination which has tempted many persons to test its effects to their ruin. On the other hand suggestion as a remedy is often a great power.

Many incidents are reported of producing nausea from the use of spirits followed by suggestion that it was positively poisonous to the system, which practically impressed the organism so powerfully that complete restoration followed. Hypnotism, in its higher methods of application, is now recognized as a useful method of treatment. This with suggestion is a very great power, supplementing the concealed methods of the quacks.

The periodic inebrieties are masked forms of epilepsies terminating in dementia. Homicides and crimes of violence occur in these cases. The transient paralysis of the brain and nervous system, associated with and following these drink storms, impair the reasoning centers and the consciousness to such an extent that irresponsibility is always present in greater or less degree. The periodic drinker is the law breaker, and belongs to the new army of the insane, we are just beginning to recognize and study.

The continuous user of spirits is another branch of this great army leading in another direction to degeneration and death. A certain proportion of these cases have paresis and the continuous use of spirits is only a symptom and often causes this very condition. This can be verified in a clinical study of many cases.

Pathologically the cumulative action of spirits falls most heavily on the arterial system, and the neurotic functions. Motor and sensory palsies are present in all these cases, Sensory functions are always defective and the longer spirits are used, the more pronounced the palsies and sensory defects become.

This condition of defective nutrition, toxinic poisoning, and faulty functional activities, may be classed as epileptoid and paretic. This classification is supported clinically by the symptoms, and is illustrated in the armies of police court degenerates. whose dementia and idiocy is so apparent.

The great question from these general facts is, what can be done, medicinally, socially and hygienically, to halt and break up the breeding places and remove the causes of at least half a million men and women suffering in this country today? My purpose will be accomplished if I can show that this is a medical and hygienic problem, which only scientific study will make clear.

Already we can trace on this great, mysterious field, mountain peaks and rivers, and great forests of facts, indicating the presence of physiological, pathological and hygienic laws, which move along uniform lines yet to be discovered.

Even now, scientific research and experience indicate that the family physician who will study these cases in the beginning can successfully treat and cure a large number. Later, the sanitorium and hospital under the constant care of a physician, with exact surroundings and conditions, can be equally successful. For the large class of persons who have reached stages which seem to be incurable, the state must provide work-house hospitals for their detention and treatment.

The family physician, who up to this time has ignored these cases, leaving them to the quacks, and in some instances actually advising a residence for four weeks in some so-called cure, where unknown remedies are administered by unknown men, is making a most serious mistake. His knowledge and study of such persons would point out far more exact means of treatment, which he could apply personally to far greater advantage than the strangers and quacks.

Ascertaining the causes and removing them, and applying remedies to the present conditions, is along the lines of every day work for the practical physician. The family physician will recognize first of all others the exact condition and the needs of the case, and his ability or inability to apply them practically.

Then comes the sanitorium and the private hospital, with its exact surroundings, and the means and measures for applying hydropathy, electricity, and other methods found most beneficial. Many persons do well after a short residence in the hospital to return to the family physician, where the care can be continued for months and years.

Later, when the person is found to be beyond the stages of immediate restoration, the work-house hospital will continue the work. Here inebriates should be committed for a period of years, and placed under a sharp military rule, where all the surroundings can be exact and uniform and labor and duty provided for each one.

For nearly ten years the Massachusetts State Home for Inebriates has housed and treated from four to five hundred inebriates every year. They are kept under restraint and made to labor on a large farm, and to the surprise of every one, a degree of curability to the extent of eight to ten per cent. of all inmates, has been apparent.

This institution is working out the problem of what we shall do with the pauper inebriate who is a menace to civilization, a burden to the taxpayer, and a disgrace to our intelligence, and the present methods of treatment.

The theories of inebriety, of what it is and is not, and the application of universal efforts for its control or removal, are startling by their failures to recognize the actual condition or to apply rational scientific means. The more inebriety is studied from a scientific point of view, the more pronounced the physical causes appear, and the more startling the laws which control this form of degeneration, and the certainty and uniformity of their action.

It is a sad reflection on the intelligence of the medical man who suggests to the patient who appeals to him that he go to some gold cure or empiric who promises to remove the appetite and cure him in a brief time. The appeal to medical men for help by persons who are old clients, of old families, who have employed the physician in all other matters, that are unheeded or neglected, are indeed sad. "They call for bread and we give them stones."

With a dim consciousnss of the poisoned, starved brain, they come to us for relief, and we turn them over to the moralist and quack. In despair they call in the recent graduate thinking he may have some knowledge. Here the opportunity of his life to give relief and make friends is passed by.

You all know the agonizing appeals for something from fathers, mothers wives and relatives. Now, why should not every physician be able to give apomorhia for relaxation and relief, and quassia to neutralize the drink craze, and cinchonia and strychnine to build up and remove the poisoned condition? Why should not every physician treat these cases successfully in their acute stages, and be able to carry on the treatment and point out intelligently the means and methods to be used for final cure?

Why should the police courts be called on to treat a class of cases that are neurotics, psychopaths who need medical and physical care of all others? Why should the terrible farce be repeated over and over again, of sending men to jail and expect by fines and imprisonment to restore the lost equilibrium and neurotic control?

These are questions which appeal to us with startling significance. Repeated studies of the legal treatment of these unfortunates picked up on the street, in a poisoned and delusional state, show that these very means increase the disease, and that the state is actually cultivating and training criminals, paupers, and insane by these methods.

In reality the theories of vice and moral weakness, and the legal methods of treatment are more atrocious than the hanging of old women possessed of the devil on the Massachusetts coast in 1600.

From a hygienic point of view, the growth and cultivation of the inebriate and his destruction by so-called means of cure can be traced and mapped out as clearly as that of an epidemic of typhoid fever from polluted water sources.

I appeal to every medical man to take up this subject and teach the public the real facts of inebriety, and its possible prevention and cure. To assert our position as teachers and students, not only to treat successfully the acute stages, but to direct what should be done along scientific lines, above the level of quacks, and the armies of reformers who are without knowledge. Let us show the coming generation that we understood this new malady, and its indications for treatment, in at least some degree above the present levels of the subject. This is the new field of medicine which calls for students and genuine settlers to occupy and develop.

PRACTICAL MEDICINE SERIES OF YEAR BOOKS, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Phinology, Chicago Post-Graduate Medical School. Vol. I, General Medicine, edited by Frank Billings and J. H. Salisbury. Vol. II, General Surgery, edited by John Murphy, M. D. Publishers, The Year Book Publishers, Chicago, Ill.

It is scarcely necessary to mention the purpose of the Practical Medicine Series. Each volume is supposed to represent the advance along the line of various subjects.

Vol. I for 1905 covers General Medicine. The author, Frank Billings, in his introduction states that it is the purpose of the editors to place before the reader a review of the literature of general medicine of the past year in a condensed form and still full enough to convey the full meaning of the author.

Vol. II of 1905 series covers general surgery. It would be impossible to mention the new features contained in this volume; suffice it therefore that the reader will find it a very interesting and valuable regime of the literature of the past year.

EXCISION OF THE ELBOW-JOINT FOR TRAUMATIC AND ARTHRITIC ANKYLOSIS.*

BY MERRILL RICKETTS, PH. B., M. D., CINCINNATI, OHIO.

The author, in a clear and concise manner, traces the history of the "Excision of the Elbow-Joint" from the time of Wainman of Shripton, England, who was the first to perform this operation for any cause (1758). He notes conclusions, that a number of the more prominent operators have drawn from their own work, and that of others and gives Gordon Buck credit for having made the first excision in America for traumatic ankylosis (1842); Joseph Pancoast, the first for disease (1842); and Hoyt, the first for gunshot wound (1847).

He states as the province of his paper, the consideration of ankylosis of the elbow-joint due to acute or chronic suppurative synovitis without injury to, or destruction of, the bone, to acute or chronic non-tubercular synovitis without injury to, or destruction of, the bone, or to fracture of the articular surfaces of the bones entering the formation of the joint.

He mentions rotation, supination, flexion, and extension as the functions to be restored by the operation and hemorrhage, gangrene, paralysis, pain and flail as the possible complications.

In each of the five cases of his own which he considers, the patient was a female between the ages of 20 and 30 years, and in each case also the right elbow-joint was involved. After carefully summing up the results of more than a thousand cases which have been reported, to date, in hospital and private practice, he draws the following conclusions:

1. Excision of the elbow-joint for ankylosis due to any cause, at any age is a most rational procedure.

2. If possible, it should be done before or at the time that ankylosis is complete.

3. A posterior median incision is most practical.

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*Abstract of a paper read before the Western Surgical and Gynecological Association, Milwaukee, Wis., December 28-29, 1904, and published in the Journal of the A. M. A., January 6. 1905, and in Amer. Jour. of Surg. and Gyn., February, 1905, pp. 134-138.

4. With care the operation can be done without injury to blood vessels or nerves.

5. Drainage should always be provided for.

6. The arm should be placed upon a right-angle splint.

7. Results are better when only the articulating surfaces are removed.

8. If there is complete bony union of the articulating surfaces much more bony tissue must be sacrificed because disarticulation cannot be accomplished.

9. All soft structures cut transversely will unite, but new insertions are formed which destroy their functions.

10. All attachments of tendons and muscles should be preserved.

11. All periosteum should be preserved.

12. If excision of the joint is complete, leaving only the ends of the shafts, flail joint can be prevented by approximating their ends with kangaroo tendon at time of primary operation.

13. Wire or nail may be used, but their removal sooner or later will be imperative.

14. Flail joint rarely results from any form of excision, but is more likely to be found following excision of the entire joint.

15. If flail joint results a mechanical devise may be employed.

16. Injections of alcohol or one or more of the various astringents will increase fibrous tissue both in quantity and density.

The paper is profusely illustrated with skyographs and photographs.

RABIES IN COLUMBUS.

H. C. RUTTER, ERNEST SCOTT AND JOHN D. DUNHAM.

The committee, appointed by the Columbus Academy of Medicine, to investigate the existence and extent of rabies in the city of Columbus, and report with such suggestions and recommendations as seem to them best for its amelioration and prevention, submitted at the January 2d meeting the following report which was indorsed by R. C. Tarbell, J. E. Brown and Charles J. Shepard, Press Committee of the Academy:

EXISTENCE OF RABIES DOUBTED.

Very few persons of the present time have the temerity to doubt the existence of a disease known as hydrophobia in man, and rabies in the animal. Yet, notwithstanding the overwhelming evidences to the contrary, a doubting Thomas is occasionally found who still remains unconvinced, in the face of thousands of complete demonstrations, that have been made in all parts of the world, not only proving its existence, but, in addition, showing a fairly complete knowledge of its pathology and clinical history. It is unnecessary to go into details to prove this fact, but it may be well to make the broad statement that all, or nearly all, of the nations of the world have officially recognized it, and most of them have taken steps looking toward its amelioration and prevention.

FORTY-NINE CLINICAL CASES REPORTED LAST YEAR.

During the year 1904 the following veterinary surgeons of this city have reported rabies as follows: Dr. Brown, 14 cases; Dr. Hillock, 20 cases; Dr. Carl, 12 cases; Dr. Simons, 2 cases; and, in addition, Dr. Griffith reports one case, making in all 49 cases of rabies reported by the veterinary surgeons and Dr. Griffin. In these cases the diagnosis was clinical and no laboratory tests were made to prove it. At the O. S. U. laboratory 22 cases were reported, in all of which postmortem examinations were made, and were said to show the ganglionic changes characteristic of the disease. Inoculations of rabbits resulted in the death of the animals with all the symptoms of rabies.

These observations were made by Dr. Phillips of the O. S. U. laboratory. Dr. Paul Fisher, state veterinarian, reported rabies present in 27 counties in the year 1903. We are informed by reliable authority that a number of dogs were bitten in December by a dog proved by laboratory tests to be rabid. These dogs were all living in the North Side of Columbus, but have not been identified, so that it is impossible to find and isolate them.

SEVENTY-ONE CASES IN THE CITY LAST YEAR.

It will be seen that 71 cases of rabies have been reported during the year 1904 in the city of Columbus, although we have reports of only two persons in the city having been bitten by any of the animals, and these cases were promptly sent to the Pasteur institute in Chicago for treatment, where they failed to develop any evidences of hydrophobia.

RABIES EPIDEMIC MAY COME FIRST OF YEAR.

The period of incubation averages about three months, so that if any cases resulted from these dogs bitten in November and December, we may expect an epidemic of rabies about the latter part of January, February and March, so that common prudence would indicate that precautionary measures of some kind be taken to prevent an outbreak of rabies about that time. There is but one way to prevent rabies from increasing, and for stamping it entirely out, and that is to muzzle all dogs for a certain length of time, everywhere in the country.

CONDITIONS IN GREAT BRITAIN.

Some years ago a commission appointed in Great Britian to report upon the subject of rabies, its cause, treatment and prevention, made a most exhaustive investigation of the subject, and their report embodied some exceedingly valuable suggestions for stamping out the disease. They unanimously reported in favor of compulsory muzzling of all dogs. The recommendations of the commission were carried into effect with the following results: In the year 1887 there were 217 cases reported; in 1888, 160; in 1889, 312. In the last mentioned year muzzling was adopted, and the number fell to 129 in 1891, and to 38 in 1892. The muzzling was then stopped. In 1893 there were 93 cases; in 1894, 248, and in 1895, 672. Muzzling was again resorted to, and in 1896 there were 438; in 1897, 151; in 1898, 17, and in 1899, 9, and in 1900 none.

The same experience was had in Berlin, where no cases have occurred since 1883, when muzzling became imperative. The law is uniform in its operation throughout the German empire.

MUZZLING SUCCEEDS IN HOLLAND.

In Holland, before 1875, rabies was prevalent to a very serious extent, but in July of that year the use of the muzzle was ordered, with the result that in the autumn the number of cases fell to 41; in the next year there were 55 cases; in 1877 there were 14, and in 1878, 4, and in 1879 there were 3. These, and the few cases which have occurred on or near the frontier of Belgium, where muzzling is not practiced, although rabies is always prevalent, are the only cases which have occurred in that country.

In Sweden rabies was at one time rather common, from 8 to 10 people dying from hydrophobia every year, but since the enforcement of muzzling hydrophobia has become unknown, no deaths from that cause having occurred since 1870. For muzzling to be effective, however, it must be universal.

If all of the dogs in Columbus were muzzled all of the time, there would be little danger of hydrophobia, but the moment the muzzles were removed the danger would be as great as ever. It must be remembered that the rabid dog is likely to become a stray dog, since it is the habit of many animals affected with rabies to go away from home, pursuing an uncertain course sometimes 50 miles or more from home, biting other dogs and animals and sometimes human beings with whom they come in contact. Hence it is that the rabid dogs we most frequently meet with are stray dogs, having become stray and homeless after the disease attacked them. So that, even if rabies should be completely stamped out of Columbus, these stray animals coming into the city might inoculate a large number of dogs before they are discovered and destroyed. Until uniform regulations are adopted throughout the whole country for the universal muzzling of all dogs, we may be obliged to be content with other means of prevention, and, fortunately, these means are within the reach of the community. A few rules, if carefully followed by every dog owner, would effectually prevent all danger from hydrophobia.

RULES FOR DEALING WITH DOGS.

In the first place, every dog should have a responsible owner and home, and all stray dogs should be destroyed. It will be necessary to have regular dog officers to carry out the provisions of the law. All dogs should be licensed, numbered and provided with a tag which it would be impossible to detach. Any dog appearing upon the streets without the tag should be impounded, and if not reclaimed, should be destroyed. This would fix the home of every dog. The people should then be warned of the danger of rabies and cautioned to isolate or muzzle the dogs at the first signs of any indisposition whatever. In cases where rabies is suspected the dog should be captured alive, if possible, and be detained under observation long enough to determine positively the nature of its disease, when precautions should be taken with reference to persons or other animals bitten by the suspected dog. So many dogs have been killed upon the mere suspicion of being mad that the statistics of the Pasteur institute have been deprived of a considerable part of their value. One should not wait for symptoms of rabies to develop. At the slightest sign of indisposition from any cause whatever the dog should be properly muzzled and isolated until the nature of its disease is fully determined. Circulars should be issued with the licenses impressing upon the minds of all owners of dogs the danger of rabies and resulting hydrophobia, and the importance of immediately muzzling the dog upon the appearance of the slightest indisposition.

SYMPTOMS OF BONE IN THROAT SAME AS RABIES.

Especial attention should be directed to, and warning given of, cases where it is suspected that the dog has a bone in the throat, so that no efforts may be made by the owner to extract it without the assistance of a veterinary surgeon. The symptoms of rabies and bone in the throat are often identical, and many persons have lost their lives from hydrophobia by attempting to extract a supposed bone from the throat of one of their pets. While there are positive symptoms indicating rabies in its early stages, and the rule should be followed to suspect every case of illness, it may not be amiss to call attention to some of the most distinctive signs calling for unusual prudence upon the part of the owners of dogs.

SICK DOG SHOULD BE SUSPECTED.

Dr. Bouley has warned us to especially distrust dogs that show signs of illness; every sick dog should, as a rule, be suspected; particularly distrust a dog when it becomes dull, morose and seeks for solitude, appears not to know where to rest, is always on the move, prowling, snapping at the air and suddenly barking at nothing when all around is perfectly still; whose countenance is sombre, and only assumes its animated expression by brief starts; beware of the dog that seeks and scrapes incessantly and exhibits aggressive movements against phantoms, and finally beware of the dog that has become too fond of you and is continually endeavoring to lick the hands and face. To which Dr. Salmon has added the injunction to especially beware of the dog that appears to have a bone in the throat, and the dog that has wandered from home and returns covered with dirt, exhausted and miserable.

SEASONS HAVE LITTLE EFFECT ON DISEASE.

The popular idea that rabies is only dangerous in the hot months is fallacious. Seasons appear to have but little, if any, influence on the disease. The months of April, May and June show a larger number of cases than any other three months, but December is only 3 per cent. below the average of the year, so we may conclude that the temperature has but little influence. August, which is usually the hottest month, and the center of the reputed "dog days," stands fifth in the order of frequency, whereas, if high temperatures had anything to do with the disease it would, in all probability, stand first.

CHILDREN SHOULD BE CAREFUL OF DOGS.

Warning should be given to parents to impress upon the minds of children the dangers attending the patting or caressing of strange dogs, since it is quite natural for these little tots, especially those who have household pets at home, to make friends with any dogs they may meet, and take a pleasure in holding out their hands and patting dogs. Many cases of hydrophobia have been contracted from lap dogs and other small pets. A bite is not necessary always to convey the poison of rabies. Sometimes the pet dog licks the hand and touching an abraded spot, a wound, small pimple or even a tender part of the cuticle thereby conveys the poison which being absorbed into circulation causes hydrophobia.

DANGER ABROAD IN COLUMBUS.

But we are at present confronted by a problem of great and immediate importance. If the observations of Dr. Phillips be correct, and there does not seem to be any reason for doubting their correctness, a large but uncertain number of dogs must have been recently inoculated and are now at large upon the streets of Columbus awaiting the termination of the period of incubation before developing rabies. If the identity of these animals could be ascertained they might be muzzled and isolated, and thereby be prevented from doing any mischief, but as this is impossible, it would seem that the only road to safety would lie in the muzzling of all dogs, at least on the North Side of Columbus for a period of at least six months, when the dangers from those now inoculated would be practically past. This proposition is an important one, and the community will look to this academy for advice. It is the only safe means known to your committee for the protection of the city.

Signed: H. C. Rutter, Ernest Scott, John Dudley Dunham.

Indorsed by the press committee of the Columbus Academy of Medicine: R. C. Tarbell, J. E. Brown, Charles J. Shepard.

CESAREAN SECTION.*

BY JAMES U. BARNHILL, A. M., PH.D., M. D., COLUMBUS, O.

Three phases only of Cesarean section are herein presented, viz.: (1) The lessened mortality which has been secured with the successive improvements in technique; (2) indications for the operation, with report of two cases; (3) precautions to be taken to secure the best possible results.

Nowhere in the domain of surgery are the advantages of modern aseptic technique better illustrated than in the evolution of this operation. The mortality-rate has been gradually reduced by successive improvements, including asepsis, and still further reduction of the death-rate may be secured by early recognition of the necessity for the operation.

From the first Cesarean section by Jacob Nufer, in 1500, until the last quarter of the nineteenth century, during which time there were comparatively few operations, the uterus was not sutured after the operation. Hernias and troublesome adhesions were frequent and the mortality was very high. Lebas is said to have been the first to suture the uterine incision; this he did in 1769, but he was criticised by the leading obstetricians and surgeons of his day, who used no sutures, assuming that the uterine contractions would approximate the edges of the incision. Some sutured the edges of the uterus to the abdominal wound.

To Sanger belongs the credit of successfully suturing the uterine incision and of otherwise perfecting the aseptic technique. He pointed out the danger of the escape of clots and placental shreds into the peritoneal cavity and of prolonged operation. He recommended the elevation of the uterus out of the abdominal cavity and closure with two rows of sutures, one muscular, the other peritoneal or musculo-peritoneal.

As late as 1876, when Porro introduced supra-vaginal hysterectomy after removal of the fetus, the practice of leaving the uterine incision unsutured was still in vogue and was condemned by this author. Webster says that in Paris, during half a century, there was not a successful case of Cesarean section, although it had been performed about sixty times, and in the large maternity hospitals of Paris and Vienna, with 4,000 to 8,000 confinements in a year, not a single successful case of Cesarean section had been recorded. Of the early operations, Burns reports 24 cases with 22 deaths. In England, at that time accoucheurs very generally condemned the operation. Up to 1870 embryotomy was universally practiced in preference to Cesarean section. However, Harris reports 133 cases in 1888 from American literature, with only 37 per cent. of recoveries. Of 1,605 cases collected by Mayer in 1868, the per cent. of recoveries was but 54. From that time until the present, with successive improvements in aseptic methods, the mortality has been gradually lessened. Under a more perfected technique and better antiseptic methods, the mortality in selected lists has been greatly reduced by a few operators, under the most favorable circumstances, to 4 per cent.

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* Read before the Mississippi Valley Medical Association, at Cincinnati, October 11-13, 1904. Republished from the Lancet-Clinic, March 18, 1905.

In the last published report of the Lying-in Hospital of the city of New York, which covers a period of six years ending 1897, with a service of 10,233 obstetric cases, two Cesarean sections were performed, one by Dr. Markoe for deformed pelvis, both mother and child surviving. The other case, by Dr. Edgar, labor being obstructed by a fibroid tumor of the lower uterine segment, breech presentation, hydramnios, anencephalus, with suppression of urine, the mother dying forty-eight hours post-partum. In these 10,233 cases, symphyseotomy was performed six and craniotomy three times. Dr. E. B. Cragin, in charge of the Sloane Maternity Hospital, has during the last five years performed 26 Cesarean sections with the death of two mothers, one of these being nearly moribund from carcinoma, with child dead and lacerated, but with the vagina blocked with the carcinoma. The other death resulted from unexpected embolus. During the same period Dr. Cragin performed three symphyseotomies with one death from infection, the children all being delivered alive. Dr. Barton Cooke Hirst reports, by letter, thirty-five Cesarean sections with five deaths, the deaths being in cases brought in the ambulance to the hospital in bad condition. He says that he has not performed craniotomy on a living child for ten or fifteen years, except in cases of hydrocephalus. In the Chicago Lying-in Hospital and in the dispensary attached to it, where about 1,200 labors are cared for annually, six Cesarean sections and two symphyseotomies have been done in the last five years, one woman dying; all the children lived. During the same time five craniotomies were performed, one on a living child and four on dead children. In his own practice Dr. DeLee, surgeon to the above hospital, has performed nine Cesarean sections with one maternal death.

The following cases occurred recently in the service of the writer, both ambulance cases:

CASE I.

Mrs. A. was taken in labor July 7 of this year, at 1 o'clock a. m., the first stage of labor being completed at 11 o'clock. Instruments were applied by Dr. W. M. T. S. Simms, the attending physician, about 2 p. m., and again about 4 p. m., without avail. I saw her in consultation at 7 o'clock of the same evening. The head had not engaged in the brim of the pelvis, contractions were regular at five-minute intervals. The position was occipito-left-anterior. From the evident contraction of the pelvis it seemed clear that any further effort at instrumental delivery was useless and would endanger the life of the child and mother, yet to satisfy myself and the friends I applied the instruments, high forceps application, and was soon satisfied that the child could not be thus delivered. The patient was at once sent to Mercy Hospital, prepared for operation and a Cesarean section performed at 9 o'clock that evening. I was assisted by Dr. D. G. Sanor and Dr. W. M. T. S. Simms.

An incision was made through the abdominal wall about seven inches in length, extending to the left of the umbilicus; the uterus was drawn well into the wound, but not entirely out through the abdominal opening; a mesial incision through the fundus and anterior uterine wall was made. As is usual in dorso-anterior positions, the placenta was attached posteriorly. There was little difficulty in controlling the bleeding, packing about the uterus preventing the escape of liquor amnii into the abdominal cavity. The membranes were opened, the hand passed into the amniotic sac beneath the buttock and the child turned out, the assistant compressing both broad ligaments with his hands to prevent bleeding, and, as the child was removed, pressing gently upon the sides of the uterus as it contracted. The cord was clamped and severed, and the living child turned over to the nurse for resuscitation. The hand was introduced, the placenta readily peeled off and lifted out of the uterine cavity. There was very little hemorrhage, the inner surface of the uterus presenting a smooth, grayish appearance. The uterus being compressed with hot sponges and slightly elevated by a large sponge beneath, but not removed from the abdominal cavity, the uterine wound was closed with two rows of interrupted catgut sutures, and the peritoneum, with edges slightly inverted, closed in the usual way with catgut. The abdomen was closed with catgut and subcuticular silkworm-gut suture. The patient made uninterrupted recovery, not knowing herself that the Cesarean section had been performed until eight days afterwards, when the stitch was removed. Her temperature never rose above 100° and the patient sat up on the fifteenth day, and was dismissed from the hospital August 15. Both mother and child are living.

The tubes were not removed, as the patient had not given her consent for this procedure and the degree of contraction does not preclude the possibility of the birth of a small child. She has been advised to have a premature delivery at about seven or seven and one-half months in case she again becomes pregnant. The child weighed seven pounds and fourteen ounces, the cephalic measurements being: Bitemporal, 3 1-10 inches; biparietal, 3 1-2 inches; bimastoid, 3 inches; occipitofrontal, 4 1-4 inches; sub-occipito-bregmatic, 3 1-2 inches.

Maternal measurements: External conjugate, 6.63 inches; true conjugate, 2.99, or about 3 inches; interspinous, 22cm.—8.5 inches; basiliac, 27cm., or 10.5 inches; intertrochantric, 31 cm.; external oblique diagonal, 17.5 cm.—6.85 inches; bisischiac, 8cm.—3 inches. These are the outward evidences of a flat contracted pelvis with a very pronounced sacral prominence.

CASE II.

Mrs. B., aged twenty-four, in her first labor. She was small of stature, belonging to a rachitic family. A sister has a marked curvature of the spine. The week preceding labor albumin had been found in the urine. Labor began at 6 a. m., September 28, of this year, the first stage lasting twenty-one hours;

the second stage beginning at 3 a. m., Thursday morning, the 29th. The physicians in charge, Drs. J. A. Riebel and A. A. Peasley, recognized the contracted pelvis, but thought there was chance for instrumental delivery. Instruments were applied about 9 o'clock of the same day, and after several unsuccessful attempts at delivery the patient was sent to the Protestant Hospital. Measurements were taken of the pelvis showing that the conjugate diameter, as nearly as could be determined, was three inches, interspinous diameter eight and one-half inches. The child was living, as revealed by fetal heart beats and active movements; the abdomen large, the uterine mass high up in the abdomen. After consultation with the husband in reference to the condition and with his approval, Cesarean section was determined upon and performed about 3 o'clock that afternoon. I was assisted in the operation by Drs. Riebel, Peasley, and the house physicians. The improved Sanger operation was performed, an incision seven inches in length, extending one-third of its length above umbilicus, was made. The uterus opened well toward the fundus. The placenta was found attached to the anterior superior wall of the uterus. Through a small opening the hand was passed readily along the side of the detached placenta and the feet of the child secured and the delivery readily effected. The child was living, but its head was injured by compression and it died twelve hours after birth. Considerable hemorrhage occurred, but not an excessive amount. The assistant pressing the broad ligaments readily checked further hemorrhage. The uterus contracted readily. The uterine wall was sutured by two rows of interrupted No. 1 catgut and the peritoneum closed with No. o interrupted suture. The abdomen was readily cleansed of the small amount of blood which escaped into it and closed in the usual way with interrupted catgut sutures and subcuticular silkworm. No effort was made to remove the tubes, as the size of the pelvis did not preclude the possibility of the birth of a seven months' child, and for the additional reason that the exhaustion was such that we considered that their removal would entail additional delay and shock. The pulse at the beginning of operation was 130, at conclusion 180 and somewhat irregular. The patient rallied from the anesthetic and appeared in fair way for recovery. But there was almost a complete suppression of urine, weak, irregular pulse and absence of normal peristalsis of the bowels; fever developed and the patient died at 6 o'clock the following day, about twenty-six hours after the operation.

Measurements of child: Bitemporal, 3¾ inches; sub-occipito-bregmatic, 3½ inches, bimastoid, 3 inches; occipito-frontal, 4½ inches; occipito-mental, 3½ inches; biacromial, 5½ inches; length, 20½ inches; weight of child, 11¾ pounds twelve hours after death.

As to indications, Cesarean section may be considered in all cases, under permissible circumstances, in which the outlet of the bony pelvis is so contracted that forceps delivery of a child is impossible, and especially in cases in which the degree of contraction or deformity is such as to render a craniotomy dangerous on account of the liability of injuring the maternal parts.

If the smallest diameter is less than two or two and one-half inches, there is absolute indication for Cesarean section, which holds good whether the fetus is alive or not. Advanced carcinomatous degeneration of the cervix may also be regarded as an absolute indication.

Garrigues gives the following as absolute indications for celiohysterotomy: "When the fetus cannot pass the genital canal, or when the disproportion between the fetus and the canal is so great that delivery through the normal passage would entail greater dangers to the mother than Cesarean section, and when tumors exist which cannot be replaced or diminished."

"The relative indication obtains," says the same author, "when the smallest diameter measures between 2½ and 3 inches, (5 and 8 centimetres), but is restricted to certain conditions: (1) The fetus must be alive, viable, and not materially deformed. A hydrocephalic fetus, for instance, should be diminished by craniotomy. (2) The mother must be in good condition. Labor must not have been too protracted, say not over twenty-four hours. The case must have been treated with antiseptic and aseptic precautions, and it must be reasonably sure that no infection has taken place. (3) The accoucheur must explain to the patient that unless something is done both she and her child are lost. If it is a favorable case, he may in good conscience tell her that it is nearly certain that the child will be saved and that her own risk is small provided Cesarean section is resorted to without delay."

Cesarean section should be the operation of choice, according to Williams, for all cases with a conjugate 3 inches (8.5 cm.) for flat and 3½ inches (9 cm.) for justominor pelves in which the head fails to engage in the brim. These indications cannot be regarded as certain guides on account of the variability of size and plasticity of the head. Hence, with a conjugate of about 3 inches it is well to be prepared for section, permitting, however, labor to go on for an hour or more in the second stage. If the head can then be made to engage with high forceps or otherwise the labor may be terminated with instruments; otherwise, if the woman be uninfected, Cesarean section may be carried out. In such cases Williams holds that Cesarean section offers life to the child without appreciably raising the maternal death-rate.

Every practitioner, says Dr. Reed, of this city, should be able to form a fair estimate of the amount of contraction, as it is easier to measure a contracted pelvis than a normal one, and it does not require a highly skilled obstetrician to say, before labor has commenced, or during the early stage of the process, that the diameter of the pelvis is, or is not, less than three inches; and, as a matter of fact, such diagnosis should be within the skill of the ordinary practitioner. Not only must he be able to form an estimate of the amount of contraction, but by patient study of normal cases he should qualify himself to form an opinion as to whether it will be possible for a living child to pass, and also whether, under the difficult circumstances in which he may be placed, it would not be better to send the patient where Cesarean section could be resorted to in case it seems advisable.

In all cases in which a fair trial with high forceps or with the best form of axis traction forceps and Walcher position has been made, child living, Cesarean section, or, in suitable cases symphyseotomy should be done rather than craniotomy. Experience shows that section performed late in labor subjects the woman and child to more risk than when performed early. As to the relative dangers to the mother in Cesarean section and craniotomy, Webster savs: "Cesarean section is probably as safe for the mother as is embryotomy, and has the advantage of saving the fetus in the great majority of cases. Pinard has reported a maternal mortality of 11.5 per cent. in eighty-one embryotomies, some of the deaths, however, being due to trauma and sepsis resulting from manipulations of practicians before admission to his service."

Dr. J. Clifton Logan, attending obstetrician to the Emergency Department of Bellevue Hospital, says: "Craniotomy upon the living fetus is not performed at this hospital service, Cesarean section being the operation chosen. He conceives in the opinion that craniotomy upon the living fetus is frequently performed in the country districts at some distance from a medical centre."

Dr. J. B. DeLee, Medical Director of the Chicago Lying-in Hospital and Dispensary, says that Cesarean section is rarely performed at the Cook County Hospital, because the cases that are sent in there for delivery are so mutilated that it is thought best to deliver by craniotomy, and that in the last few years a number of such operations have been performed. He says that he has found it necessary to sacrifice several children when, owing to persistent attempts at instrumental delivery or the presence of sepsis, they thought this to be the best way of delivering the patient. In his own opinion, craniotomy is still performed too often in general obstetric practice, or, if not craniotomy, then forced forceps operations, which are worse for the mother than craniotomy and result in the delivery of a dead infant. "They are," says the same author, "due to a lack of obstetric knowledge, and lack of clinical teaching, and lack of appreciation, both by the public and the profession, of the high skill requisite for the proper practice of the obstetrical art."

The high mortality in the past, and even at the present time, is no doubt due in a large measure to undue delay in performing the operation; not infrequently instrumental delivery is persisted in under chloroform for several hours, during which the patient becomes very much exhausted. Patients should be carefully examined in the later months of pregnancy, pelvic measurements being taken, and in all cases of contracted pelvis provision should be made for the operation, if it become necessary, and in all cases in which it is plainly evident that the living child cannot be born such patients should be placed in a hospital for confinement, and here the operation should be perormed at the onset of labor and even before it begins. A proessional friend told me that he witnessed three Cesarean secions in one day's clinic at a Vienna hospital, operation being lone before labor came on.

In this day of hospitals, ambulance transportation, and rained nurses to prepare the home for patients who cannot be noved, circumstances can be rendered favorable for almost all ases. An early diagnosis of a contracted or rachitic pelvis hould secure for any woman hospital care in the last weeks of estation. With these cases a diagnosis having been made, oprative procedure should be planned and carried out before the atient becomes exhausted by labor. The great majority are ithin easy reach of hospitals even after labor has begun, and, esides, with trained nurses and a little time fair conveniences nay be improvised in many a home remote from hospitals, thus educing to a very small number the possible emergencies in hich one is reduced to the necessity of sacrificing the child to ave the mother, which, of course, is to be done in all cases if ne must decide between the two. Such cases there doubtless till will be, but their number will gradually decrease with the ncreasing facilities of civilization, the enlightenment of public entiment, and improvements in surgical technique.

In this brief paper I have not attempted to give the differntial indications between Cesarean section and the various ther operations, as celiohysterectomy, symphyseotomy, embrytomy, cranioclasis, etc., but have attempted rather to show nat the results of experience commend this operation as a conervator of human life, that its success depends largely upon its eing anticipated and carried out at the proper time, and that nere is need of educating the public to an appreciation of the nportance of calling in the family physician early to look after ll women during gestation.

CONCLUSIONS.

1. The public should be educated to a better appreciation f the importance of proper obstetric care during gestation and t the time of confinement.
2. The profession should insist upon preliminary examiations to determine the probable dangers connected with each ase.
3. All cases presenting absolute indications should be proided with hospital care and operated upon at, or just before, ne onset of labor.
4. In cases with relative indications, due preparation nould be made for all possible emergencies, either in the home r at the hospital, and if operation be determined upon it should e carried out before the patient has become exhausted by pronged labor, narcosis, and use of instruments.

A REPORT OF A CASE OF RABIES.*

BY A. C. BARNES, M. D., GROVEPORT, OHIO.

On Sunday, September 4, 1904, at about 6 o'clock p. m. I received a call by telephone to visit a boy at some distance in the country. Replies to my inquiries regarding the nature of the illness indicated that the patient was having "spells" in which he did not get his breath well. I lost no time in getting to the patient. Found a boy five years old, of bright and healthy appearance, the third one of five healthy children in the family. Had been sick four days, gradually growing worse. The first the parents had noticed of the illness was on the preceding Wednesday at the dinner table. The child had exclaimed, "O papa, there's pins sticking me in the legs." Similar complaints were made from time to time, and the father had taken down the clothing to discover the irritating substance, but found nothing. Pains in the feet were subject of complaint, these pains gradually growing worse. Patient scratched outer aspect of left lower leg. Itching and pains became severe. On Friday there was complaint of sore throat. It was noticed that swallowing was difficult. Friday night patient was nervous, could not draw a long breath, breathing was "ketchy" and patient did not sleep well. On Saturday morning the bath did not agree. In the language of the mother the child "couldn't stand it to have water put on him. He wasn't *afraid* of the water, but it seemed to induce the spasm." Constipation had been present for a day or so.

At the time of my visit the patient was restless, standing and walking about the room. The cheeks were flushed and prolatia pale, suggesting pains of belladonna poisoning, or scarlet fever. Pulse regular and about 100. Axillary temperature, 102.5. Taking temperature under tongue was not attempted because of convulsive action of chest, pharynx and mouth. This action became exaggerated on approaching thermometer to the mouth. My usual admonition to "close the lips but not the teeth upon the thermometer" could not have been heeded by this spasmodic patient.

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* Extract from a paper read before Columbus Academy of Medicine and State Medical Association.

Pronounced paroxysms involving chest and throat were occurring at intervals of about seven minutes or oftener if attempts to swallow were made oftener. He was eagerly desirous to drink, but on presenting a glass of water the spasm was precipitated and it seemed impossible to swallow more than a small portion. He was not afraid of water, but deglutition was well nigh impossible because of throat spasm induced by the attempt. To mitigate this difficulty the baby brother's bottle with its rubber tube had already been called in requisition.

At no time was the patient quiet. He would sit upon his father's or the doctor's lap for a short time only; sought frequent changes in position; and upon attempts to examine him or give him food or drink and upon exposure to draught, spasms were induced. Hyperesthesia was marked. Fear was not present. History of nervousness was denied. The patient had not been frightened by stories about mad dogs. The presence of the doctor did not disturb. Hysteria was not a factor. One question remained, "Is this the boy who was bitten by a dog some weeks ago?" The affirmative answer completed the clinical diagnosis.

The wound scars were upon the left lower extremity. One extended across the anterior aspect of the lower leg about one inch above the malleolar region from the inner side and above downward and outward a distance of about one inch. The tooth of the dog had evidently torn across and through the skin and superficial structures, causing considerable laceration. A second scar was over the outer malleolus, indicating a punctured wound without much laceration. The third scar was about one and one-half inches above the second and indicated some laceration. Above this scar there were abrasions caused by scratching. These scars were slightly elevated above the surrounding surface, the skin tensely drawn as if by an exudation underneath, of a rich port wine color and glazed appearance.

The patient had been barefooted when bitten, fifty-six days before symptoms developed, i. e., symptoms observed by the family. The offending dog was a dark colored cur, weighing about twenty pounds, bedraggled with mud and bearing wounds in many places as if in frequent fights. This dog was pursued by the patient's father, shot and killed and thrown into the river. After this good (?) deed the patient's wounds had been dressed with turpentine.

By way of parenthesis I may remark that about the time of these occurrences a relative of the family told me a portion of this story. I suggested that the case be seen by a physician and the patient taken to a Pasteur institute; that a way of defraying the expense had been provided by a bill, for the passage of which by the last session of the General Assembly of Ohio we are indebted to Hon. Lewis B. Houck of Mt. Vernon. This message was conveyed to the family, but honored in the breech like many another piece of *free* advice.

The patient had not slept well the preceding night, and now natural sleep was out of the question. One-sixteenth grain morphine with atropine was administered hypodermatically and the same dose prescribed in solution to be administered through a glass tube every hour if necessary. An unfavorable prognosis was given, but removal to the Pasteur Institute at Chicago was advised and arrangements made to go by the earliest train, leaving Columbus the next morning.

I had some doubt about the patient living till morning or until the journey could be completed, but acted upon the slight chance gleaned from a few authors hastily consulted. The trip was undertaken, but the patient suffered a succession of convulsions, all symptoms grew rapidly worse and the patient died before reaching the institute.

PHYSICIANS' VACATION AND WHY WE SHOULD TAKE ONE.

BY W. N. UNKEFER, M. D., PIQUA, OHIO.

Vacation means vacuor or vacuum, empty, or thrown out, rest, stop. In our case it means cessation from work. Some people turn their vacation into dissipation; others into recreation. If used properly it is re-creation. What if you are a new creature? The physiological effect of rest is wonderful. It drives clouds away, paints in bright, new colors the dull round of daily care and duty. It inspires new interest in our patients, lends zest and enthusiasm to investigation, equips us to battle nobly with the duties and difficulties of professional life. The effects of overwork are: It lessens our perceptive qualities; incapacitates us from making a clear diagnosis; our constitution is weakened; therefore our patients suffer with us, as they need a bright countenance and cheery demeanor as well as medicines to assist them in their affliction.

I am sorry to say that many physicians by being overworked, and in an exhausted condition, have made use of drugs and stimulants to excess to tide them over a tired and weary condition, and to their sorrow no doubt kept on and on until it grew as if a part of them, when it seemed impossible for them to cease using them, and they went from worse to worse until they died wretched and a premature death. I have known many such cases. They are to be pitied rather than censured. A man's vacation should be carefully adapted and sought to suit his own needs, both mental and physical. Some need the stir of the city as the country physician, always being where it is more or less quiet, might enjoy visiting hospitals and observing the different sights that are to be seen in every large city. Some would enjoy the lively scenes of the seashore, life near large hotels, and the busy throngs; some the bracing air of mountain climbing, taking nature's study, like birds or zoology; some sailing, others the quiet solitude of the forest with hut and gun. Who would begrudge a physician a few short weeks of rest and recreation? It is his duty to leave cares and tribulations behind and go away and stay until he feels like a new man. Come back and fight the battles over again. It is just as necessary that we have different varieties of scenery and occupation for the brain as it is different varieties of food for the body, in order to have a healthy constitution.

It is a true saying that "All work and no play makes Jack a dull boy." We need the rest to do justice to ourselves as well as our patients. No profession endures more hardships than the physician. He goes whenever and wherever called without very much remuneration at times, and often without rest. But he is always ready to administer to the wants of his patients, and does it cheerfully. We are servants of the public and consecrate ourselves to them. When pestilence walked abroad in our land and its victims were falling on every side, struck down by the invisible arrows of death, then did people on every hand flee for their lives. But the physician staid behind. Had they any shield to interpose between their defenseless breasts and the darts of the unseen foe? No. They had no other shield save that which every brave man carries—an invincible determination—the inability to acknowledge fear, an overpowering sense of duty. And they interposed their own bodies between a stricken people and the midnight wrath and fell by the wayside together with those they strove to save. We have in our city at the present time a few cases of smallpox. But the physicians labored day and night, especially our health officer, and assisted to eradicate it and protect the citizens from further danger. They do it and know not what minute they may be stricken down with the dread disease. Many physicians of the county, also state, can testify to the same.

In order to solve the mystery of the yellow death, men of our profession sought out and courted danger that they might rob the grim scepter of his mastery and his quiver of its most poisoned arrow.

The members of the United States Army Yellow Fever Commission, who suffered themselves to be inoculated with the most dreaded scourges, were just as truly the leaders of a forlorn hope as the uniformed band that storms a dangerous breach. Dr. Lazear died that others might live. He is not alone in his martyrdom, but stands enshrined in our hearts, the type of many who have gone before, and countless willing sacrifices that are to come. Such deeds as these have ever been the history of our profession.

We must break the monotony of life if we would be healthy. Mental power cannot be gotten from ill-fed brains. Our lives are shortened by our own ignorance. The physician labors day and night—same thing all the time. He needs to get away occasionally and smash the machine of monotony. If we should launch ourselves against the tiresome routine of our daily existence with decided initiative and valiant effort toward rational variation the results would soon show themselves in added strength and relish of life.

The skill of a physician is in part similar to that of any other man of science. Primarily he should have a mind of detail and exact thinking. He cannot get that by overwork. No profession in our day has made such progress as the medical (counting surgery as part of it), and its unexampled improvement is part of our progress in science—the field of thought in which the nineteenth century was most notable. In many professions there has been but very little progress. We surely have much to be proud of as a profession, all due to hard and laborious study and work.

Pleasurable events, success, material gains, gratified desires will add to our means of enjoyment. Once this consciousness takes possession of us the fountain of happiness is set in action and will flood our being even in times of sorrow and in hours of pain. And as we walk down the western slope of life we will find happiness growing sweeter and deeper, realizing that life is eternal and that we are entering upon a wider experience.

Nature has her medicines and draughts for all who will come to her for cure. She loves her children, and who of all her children so much needs her care and cure as our physicians, whose daily strength is given away with lavish hands? To him who in the love of nature holds communion with her visible forms she speaks a various language.

CUTTING THE RECTAL VALVES.

BY W. C. GATES, M. D.,

Surgeon to the Marysville Hospital, Marysville, Ohio.

Recently, while examining a patient for another difficulty, I found the rectal valves greatly thickened and quite rigid. Knowing that they needed attention and having had little experience I looked the subject up. Some authors advise putting a metal clip on the valves and letting it slough away. Gant's clip I believe too heavy and the shank too long; in fact, I have known of cases where it produced trouble. Pennington's clip is too hard to disengage from the carrier after it is applied; and again it may not produce enough pressure. The clip devised by Dr. Wells Teachnor of Columbus I found the simplest and by far the most efficient, but it is not listed by any of the dealers and has to be made to order.

Not being satisfied with the clips and having had some experience with the McGraw elastic ligature in intestinal surgery I decided to try a ligature, although I could find nothing in the literature at my command suggesting the use of a ligature on the rectal valves. I cut the lower valve and checked the hemorrhage by a few moments pressure of the forceps. Working through an eight-inch pneumatic sigmoidoscope I passed a heavy linen ligature through the upper valve with a long cervical needle properly bent for the purpose. Pulling out the long ends of the ligature I threaded a large shot, pushed it firmly home and crushed it. I could find no forceps with jaws long or heavy enough to crush a shot, working through the sigmoidoscope, so had a local mechanic make a short-jawed nipper operated by a thumb screw which I found most efficient.

The cut valve had healed by the time the ligature came away, ten days after it was applied. The ligature pulled the upper valve into a series of folds when applied and the adhesions formed now hold it that way. It offers less resistance to the passage of feces, and I believe gives a better result than the cut valve. While this may not be new, I have found nothing written on the subject. I think that ligature is just as safe and efficient as any of the clips used for this purpose, much less expensive and easier to apply. I shall use it again when occasion requires and would be pleased to hear from any who have had experience in this line.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, May 1, 1905.

F. F. Lawrence, President. Charles J. Shepard, Secretary.

Members present, forty-one. Cases were reported and pathological specimens presented by Drs. James U. Barnhill and J. F. Baldwin.

Dr. Upham read a paper on "Stricture of the Urethra." Discussion by Drs. Wilcox and Gilliam.

Drs. F. S. Rarey and J. O. Hoffhines, Columbus; William Hoover, Grove City, and John W. Shook, Canal Winchester, were elected to membership.

Regular Meeting, May 15, 1905.

Members present, thirty-nine. Pathological specimens were presented by Dr. E. E. Gaver.

Dr. Loving read a paper on "Diagnosis and Treatment of Some Diseases of Heart." Discussion by Drs. Moore, Rankin, Hatton and Carter.

Dr. Robert B. Smith was elected to membership.

OHIO SOCIETY OF UNITED STATES PENSION EXAMINING SURGEONS.—The first annual meeting of this society was held in the parlors of the Neil House in this city, May 11th. About fifty members were in attendance. Dr. Cline of Portsmouth read a paper on the "Claimant," and Dr. N. R. Coleman presented the subject of "Myocarditis." The papers were discussed by Dr. L. Woodruff, Dr. Andre and others.

Dr. C. D. Mills, of Marysville, was elected President for the ensuing year and Dr. O. C. Andre, of Waverly, Secretary.

STATE PEDIATRIC SOCIETY.—The tenth annual meeting of the State Pediatric Society was held May 9 at the Neil House in this city. Papers were presented by Drs. Darlington J. Snyder, Columbus; Gilbert S. Bailey, Cincinnati; W. W. Pennell, Mt. Vernon; B. Merrill Rickets, Cincinnati; Hugh F. Lorimer, Jamestown, and I. Wolfstein, Cincinnati.

Dr. A. C. Cotton, Professor of Diseases of Children at Rush Medical College, Chicago, delivered an address on "The Call of Pediatrics." This address was followed by a banquet at the Great Southern Hotel, at which Dr. J. D. Dunham, of this city, acted as toastmaster. Toasts were responded to by Drs. C. L. Patterson, William A. Dickey, C. A. Reed, A. C. Cotton, J. V. Kofron, Darlington J. Snyder and William Clark.

The following officers were elected for the ensuing year: Dr. William Clark, Cleveland, President; Dr. Frank Winders, Columbus, First Vice President; Dr. Hugh F. Lorimer, Jamestown, Second Vice President; Gilbert L. Bailey, Cincinnati, Secretary and Treasurer; Drs. J. E. Beery, Columbus; Fred C. Taylor, Cleveland; N. B. Wilson, London, and Elizabeth Campbell, Cincinnati, members of the Council.

OHIO MEDICAL UNIVERSITY FACULTY.—The following additions and changes have been made in the Faculty of the Ohio Medical University: Dr. V. A. Dodd was elected instructor in Orthopedic Surgery, vice Dr. William L. Dick; Dr. J. J. Coons, of Johns Hopkins, assistant to the Chair of Practice; Dr. C. J. Shepard, of Bellevue Hospital Medical College, 1894, instructor in Dermatology; Dr. Ira J. Mizer, instructor in Diatetics; Dr. George H. Matson, who is professor of Materia Medica, was, in addition, appointed assistant to the Chair of Therapeutics; Dr. William D. Inglis was promoted from instructor to professor of Obstetrics; Dr. C. W. McGavran, from instructor to professor of Physical Diagnosis, and Dr. John A. Reibel, from assistant to professor of Genito-urinary Diseases.

INTERNES TO PROTESTANT HOSPITAL.—Drs. M. Russell, Wellsville; O. O. Fordyce, Joseph's Mills, W. Va., and A. B. Gudenkauf, Sidney, graduates of Ohio Medical University, Class of 1905, have received appointment as internes to the Protestant Hospital.. Charles R. Fishell, of Denison; B. B. Griffin, of St. Clairsville, and Arthur M. Hauer, of Bucyrus, members of the class of 1906, were appointed externes to the same hospital.

THE COLUMBUS MEDICAL JOURNAL.

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JUNE, 1905.

Editorial.

SIXTIETH ANNUAL MEETING OF THE OHIO STATE MEDICAL ASSOCIATION.

The sixtieth annual meeting of the State Medical Association, held in Columbus May 10, 11 and 12, was in all respects the most successful in the history of the State Medical meetings in Ohio. There were about 500 physicians registered, while the attendance was greatly increased by physicians who were not members. The committee of arrangements did its work well in looking after every detail of the meeting.

The welcoming addresses to the Association were made by Honorable R. H. Jeffrey, Mayor of this city, and by Dr. Starling Loving, and responded to on the part of the Association by Dr. S. S. Halderman, President.

There were general sessions held on the afternoon of the first and second days and separate meetings for the Medical and Surgical Sections on the forenoon of each day. It seemed to be the general opinion that papers and discussions were of more than usual scientific interest. The address of Dr. John B. Roberts, of Philadelphia, "Surgical Diagnosis in General Practice," was one of great value.

The paper of Dr. B. F. Lyle on the "Open-Air Treatment of Tuberculosis" elicited an extended discussion. He advocated the use of tents through the summer months and shacks through the inclement weather, from October to May. "The shacks," he said, "should be built off the ground, with a double floor, boarded up four feet on the sides, above which there should be four feet of windows hinged so screens can be substituted, with a foot of screening above these windows. Canvas should be placed inside to protect the patients, when necessary. from strong winds or rain."

The banquet on Thursday evening at the Great Southern Hotel was attended by about three hundred physicians, Dr. J. H. J. Upham acting as toastmaster. Toasts were responded to by Drs. J. H. Jacobson, of Toledo; F. F. Lawrence, of this city; G. W. Crile, of Cleveland, and J. H. Whitacre, of Cleveland.

The following officers were elected: Dr. T. C. Martin, of Cleveland, President; B. F. Blair, of Lebanon, First Vice President; W. B. Hedges, of Delaware, Second Vice President; John A. Dickson, of Ashtabula, Third Vice President; D. R. Silver, of Sidney, Fourth Vice President. Councilors were chosen as follows: Horace A. Bonner, of Dayton, Second District; J. C. M. Floyd, of Steubenville, Seventh District; Dr. William B. Lower, of Cleveland, Fifth District. Drs. C. S. Hamilton, of Columbus; C. L. Bonifield, of Cincinnati; W. K. Moxley, of Ironton; John McCurdy, of Youngstown, and J. A. Kimmell, of Findlay, were elected delegates to the American Medical Association at Portland, Ore.; and Drs. J. A. Duncan, Toledo; F. D. Bain, Kenton; A. B. Walker, Canton; Robert Carrothers, Cincinnati, and E. C. Brush, Zanesville, alternates.

Following the paper of Dr. James F. Fitzsimmons, of Bucyrus, on "Contract Practice," a resolution was passed by the House of Delegates, declaring it to be a violation of ethics for physicians to contract with fraternal societies or corporations unless the work done is for the regular fees. The resolution went to the Council for final action.

The House of Delegates by a unanimous vote endorsed the action of the American Medical Association in creating a Council of Pharmacy to pass upon questions relating to "proprietary medicines." It was also decided to journalize the proceedings, the publication committee being authorized to provide for their publication.

The next meeting of the Association will be held at Canton, 1906.

OHIO MEDICAL UNIVERSITY COMMENCEMENT.

Ohio Medical University held its thirteenth annual commencement exercises at the Board of Trade Auditorium, May 3. The ninety-eight graduates, in Oxford caps and gowns, together with the speakers of the evening, were seated upon the platform.

The exercises were opened with an invocation by Rev. W. H. Lewis. In his opening remarks Dr. D. N. Kinsman, Chancellor, compared educational standards of the present with those of the past, reviewed the advancing requirements for entrance to medical colleges and for graduation, and noted the influence of licensing examinations in elevating the medical profession.

The principal address of the evening was by Dr. Emory W. Hunt, President of Denison University. His subject was, "What the Laity Expects of Physicians." Physicians should be teachers; they should teach the public how to preserve health and how to detect quackery; the latter he defined as "trading on the ignorance of the patient." He emphasized the importance of high personal and professional ideals, and recommended that every doctor read, at least once a year, the story of the doctor of the old school from "Beside the Bonny Brier Bush." He read the Hippocratic Oath and pointed out the high ideals which were therein presented. He urged the out-going classes to be efficient and conscientious in their respective fields of labor and to exalt the noble professions into which they were entering.

Dr. John W. Wright delivered the address on behalf of the Faculty. His address contained much valuable advice to the out-going classes and expressed the solicitude of their teachers as to their future welfare. We hope to publish this address in the next issue.

Professor W. R. Lazenby, Secretary of the Board of Trustees, in the absence of the President, conferred the degrees on the following candidates from the

College of Pharmacy: Paul Raymond Barnes, Harry Ray Burbacher, Roscoe Blaine Johnson, Walter Philip Rotsinger, Wilbur Henry Stalder, John William Sutherland—six;

College of Dental Surgery: John Ray Osborn, Ernest Haven Atkinson, Edward Ernest Buhrer, James Nelson Brown, Edward Clayton Bumch, Elder Bright Burke, John Perkins Brooks, Francis Basinger, Charles Crowley Bonnett, John Edmund Betteridge, Harvey Francis Bailey, James William Blackburn, Henry Allen Baker, Edgar Bartley Carpenter, William John Cosgray, Gurney Leroy Compton, Loran Lonnie Cramer, Robert William Deyo, Frank Charles Furniss, Henry Harvey Gott, Paul Sebastian Goss, Bateson Gorsuch, Harvey Austin Gontz, John Holland Hamilton, James Preston Haskin, Fred Albertus Harmony, Philo Albert Kelso, Frank Maxwell Lose, Frank Ross Mann, William Forest Maury, Charles Newton Mowry, Frank Herz, Fred Hill McLean, Cloyce Edward Overholt, Charles Jacob Pressler, Earl Vernon Prior, Robert Clifton Paisley, Ross Augustus Reed, Arthur Samuel Scott, George Ellsworth Sheets, Ray Spurgeon, Clyde H. Smith, Eberle Dennis Smith, Jr., George Albert Snider, Charles Lawrence Seiffer, Clinton McLane Scatterday, Robert McArthur Temple, Harry Moore Taylor, Robert Wilson, Jr., Cecil Burton Wilson, Jerome H. C. Wyscarver, Charles Arthur Wall, Albert Ray White, John Knox Young, Guy Alfred Zimmerman—fifty-five;

College of Medicine: John Robert Adams, Clinton John Altmaier, D. D. S., Byron Webster Beatty, Karl Clark Brashear, D. D. S., Andrew Charles Callahan, William Edward Durr, John Francis Dwyer, Jr., Girard Bryce Edwards, B. S., Ora Otis Fordyce, Pedro Perca Fajardo, A. B. Erwin, C. Garber, August B. Gudenkauf, Nathan Hammond, Wilmer Hammond, Jesse John Heaton, Reuel Hammond Jones, George Watson Jacoby, Sam Van Kennedy, Willis H. Keenan, William Everett Lloyd, A. B., John Loran McAllister, Edwin H. McKinney, Williard Grant McDade, George Hiram Matson, Jr., G. Ph., Joseph Russell Montgomery, Frank Oldt, B. S., Charles Alvin Portz, Adoniran Judson Quimby, Rush Robinson, A. B., Murch Russell, Francis Erastus Reed, Joseph Seymour Rambo, John Fenner Sheffield, Archie Allego Sweet, John McCrory Thompson, James Turner, George Lyon Williams, G. Ph.—thirty-seven.

The following class orators, in brief addresses, reflected credit upon their respective classes: Blaine Johnson, on "Success in Pharmacy"; J. N. Brown, for the Dental class, on "Class Sentiments," and C. A. Portz, for the graduates in medicine, "Our Chosen Profession."

The banquet to the graduating classes and the alumni was served in the University Assembly Hall on the afternoon of Commencement Day, at which brief addresses were made by F. M. Casto, President of the Alumni Association, who served as toastmaster, D. N. Kinsman, C. S. Means, W. D. Inglis and others. At the alumni meeting the following officers were elected: Ernest Scott, M. D., of this city, President, and Dr. M. E. Blackburn, Secretary-Treasurer.

STARLING MEDICAL COLLEGE COMMENCEMENT.

The fifty-eighth annual commencement of Starling Medical College was held at the auditorium of the Great Southern Theatre, Thursday evening, May 4, 1905, in the presence of a large audience. The speakers, Board of Trustees and Faculty were seated upon the stage and the graduating class, in Oxford caps and gowns, occupied the first two rows of the orchestra. Mr. P. W. Huntington, President of the Board of Trustees, presided.

The exercises were opened with an invocation by Rev. Dr. John Hewitt, Rector of St. Paul's Episcopal Church in this city. Charles W. Dabney, A. M., L. L. D., President of the University of Cincinnati, delivered the principal address of the evening, his subject being "The Progress of Medicine and the Conditions of Its Advance." After sketching briefly the history of medicine, pointing out the factors contributing to medical progress, he took up the question of medical education and original research in this country, showing that progress depends upon the natural sciences and that medical education can be best promoted by men well trained in scientific methods. He criticised empiricism and the various "pathies" and pleaded for the better preparation of the medical students of the future and for the establishment of higher medical colleges for the training of specialists, professors and investigators. "What is needed in this country more even than the medical education of doctors," he said, "is the medical education of the patients." Before we can make very much more progress, it seems to me that we must first educate the public about medicine. They need to learn the simplest principles of physiology, hygiene and sanitation. Our first duty is to teach the people through the public schools, or in some way, how to observe and to think for themselves. They would then be prepared to defend themselves against impostors. We must look to the doctors to educate the public and to save them from the quack, the charlatan, the medical almanac and the commercial vender of patent medicines. There is much misunderstanding also in regard to the duty of the state in relation to the health of its people. Its duty does not consist merely in discriminating between schools or systems of medicine—we have had enough quarreling about that—but it should require without prejudice or partiality, all those who seek license to practice medicine for gain at the risk of the lives of their fellow human beings, a modicum of general information and a reasonable amount of scientific and professional training and experience. This is merely ordinary care and self-protection.

It is a rather striking fact that the progress in medical science in recent years has been followed by comparatively little advance in curative measures. We know the cause, for example of typhoid fever, but we can not stop it. The practical good which has come from these discoveries lies wholly in our ability to prevent disease rather than cure it. If the possibilities of such prevention are to be realized, it must be through the education of the people, and perhaps through the enactment of laws for the promotion of hygiene and sanitation. We need, for example, to educate the people of Ohio not to drink the water supplied them through our city waterworks, or else to have state and national laws to compel the cities to give the people water which they can drink safely."

The following received the Degree of Doctor of Medicine: Charles H. Hoffhine, Columbus; William R. Bebout, Wheeling, W. Va.; Lewis H. Britton, Gambier; Allen Coburn, Becketts; Ernest L. Crum, Tiffin; Ralph W. Dawson, East Liverpool; Charles A. Finefrock, Prospect; Felix C. Harman, Glandorf; Carl W. Cooper, Marysville; Jasper W. Jolley, Richwood; Benjamin R. Kirkendall, Derby; Carl R. Knoble, Galion; Charles H. Kramer, Pickerington; H. Burr Larimore, Danville; Clarence S. Latham, Hilliards; Charles P. McKee, St. Marys; Robert B. McLaughlin, John B. Morse, Resaca; Guy E. Noble, St. Marys; Clarence E. Northrup, McConnelsville; Ewing D. Piper, Bethesda; Charles L. Reasoner, Hartford City, Ind.; Edward B. Roller, Green Castle; Joseph S. Shinn, Christiansburg; Harry A. Shisselr, Dayton; Ralph H. Smith, Lancaster; J. Omar Stout, Lithopolis; Vogt G. Wolfe, DeGraff; Herschel J. Zeis, Tiffin.

The annual banquet given to the alumni of the college was served at the Great Southern Hotel at the close of the commencement exercises, more than three hundred persons being in attendance. The intellectual part of the feast, under the direction of P. W. Huntington as toastmaster, consisted of brief addresses made by the following speakers: Dr. J. H. J. Upham responding to the toast of "Tomorrow"; Dr. Dabney, "The College Man"; Dr. Starling Loving, "The Alumni"; Dr. Clarence S. Latham, "The Graduate." The Alumni Association held its meeting on the afternoon of Commencement Day at the college building. "Singleness of Aim and Oneness of Purpose" was the title of the annual address of the President by Dr. Frank Morris, of Columbus Grove. The following officers were elected for the ensuing year: Dr. J. W. Reeser, of Hilliards, President; L. L. Syman, of Springfield, Vice President; J. W. McComb, of Columbus, Secretary; O. Frankenburg, of Columbus, Treasurer.

Medical News Notes.

Drs. Josiah Medbery, Sherman Leach and C. D. Dennis spent several weeks at Indian River, Mich.

Drs. Verne A. Dodd and George Cooperrider, the retiring house physicians of the Protestant Hospital, have located in this city.

Drs. J. H. J. Upham, J. U. Barnhill and E. A. Hamilton read papers at the May meeting of the State Medical Association in this city.

Nine Months' Session.—The Ohio Medical University has lengthened its course for all departments to nine months, the session of 1905-6 to open September 12.

Seneca County Medical Society.—This society will hold its annual banquet June 20. Preceding the banquet Dr. G. P. Williard will read a paper on "Hernia" and Dr. W. S. Mumma one on "Obstetrical Forceps; Its Uses."

Drs. Ralph W. Dawson and Ralph H. Smith, graduates of Starling Medical College, were appointed internes to St. Francis Hospital, and Drs. B. R. Kirkendall and E. C. Brock to the Hawkes Hospital of Mt. Carmel.

Dr. Scott Fulton and Dr. T. E. Courtwright have removed their offices from the "McLane" to the "Vendome" on Third street, opposite the Capitol building, where Dr. Fulton has established a gastroenterologic laboratory.

MASONIC HOSPITAL OPENED.—The new hospital at the Masonic Home in Springfield, was dedicated and formally opened May 10. The hospital was erected and furnished by the Order of the Eastern Stars at a cost of $15,000.00.

At the last meeting of the Board of Trustees of the Ohio Medical University Mr. Fred J. Heer was elected President, this being for the eighth consecutive term; Dr. A. E. Evans, Vice President; W. R. Lazenby, Secretary; W. J. Means, Treasurer; W. M. Muchmore, Registrar.

The State Licensing Examination for Physicians is to be held in Columbus, Cleveland, Cincinnati and Toledo, June 13, 14, 15, 1905. That at Columbus will be held in Wirthwein's Hall, 335 1-2 South High street.

Dr. Frank Warner, of this city, has recently been appointed Surgeon to the Pennsylvania Railroad Company, in addition to Dr. T. C. Hoover, who has served as Surgeon for a number of years. Dr. C. W. McGavran has been appointed Assistant Surgeon for the same company.

At the annual meeting of the members of the corporation of the Ohio Medical University, May 3, 1905, W. M. Muchmore and W. R. Lazenby were re-elected trustees for a term of five years, Drs. J. E. Brown and Sherman Leach were elected for the same period and Dr. H. E. Semans was chosen trustee for three years to fill a vacancy.

At the recent commencement exercises of Starling Medical College Dr. Guy Eugene Noble, of St. Marys, Ohio, received the gold medal for the highest average grade in all branches. The following received honorable mention: Drs. Carl R. Knoble, Galion; Joseph O. Stout, Lithopolis; Robert B. McLaughlin, McConnelsville, and Harry B. Larimore, Danville.

Dr. Milo W. Wilson has been elected Superintendent of the Athens State Hospital, vice Dr. E. H. Rorick, resigned. His wife, Mrs. Josephine B. Wilson, was appointed Matron to succeed Mrs. Rorick. Dr. Wilson was born near Findlay in 1870, attended Findlay College and later was graduated from the Ohio Medical University. He subsequently took a post-graduate course in Philadelphia. He has been Assistant Physician at the Athens Hospital for the past six and a half years. His election to the superintendency was a deserved promotion.

STARLING MEDICAL COLLEGE FACULTY.—The following additions and changes have been made to the Faculty of Starling Medical College: Dr. Frank Winders, Bellevue Hospital Medical College, '95, was elected Lecturer on Therapeutics; Roscoe R. Kahle, Ph. B., M. D., Starling Medical College, '04, was appointed assistant to the Chair of Chemistry; Leslie M. Lisle, Ph. B., M. D., Starling Medical College, '04, assistant to the Chair of Bacteriology; Cassius M. Shepard, M. D., Jefferson Medical College, '99, was appointed to the Chair of Anatomy; Charles C. Crosby, M. D., instructor in Zoology and Embryology; Dr. Joseph S. Jones was promoted from assistant to the Chair of Materia Medica and Therapeutics to that of Lecturer on Materia Medica; Clement L. Jones, M. Sc., M. D., was made assistant to the Chair of Practice of Medicine. Dr. Septimus Sisson, Lecturer on Osteology, was granted a leave of absence for 1905-6.

Recent Medical Books.

SAUNDERS' AMERICAN YEAR BOOK FOR 1905. The American Year-Book of Medicine and Surgery for 1905. A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of George M. Gould, A. M., M. D. In two volumes. Volume I, including General Medicine; Volume II, General Surgery. Two octavos of about 700 pages each, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Per volume: Cloth, $3.00 net; Half Morocco, $3.75 net.

The 1905 issue of Saunders' Year-Book of Medicine and Surgery fully maintains the pre-eminent position which it long ago established. Dr. Gould, the editor, has associated with him a staff of men of the greatest ability, shown in the conscientious thoroughness with which each article is prepared. Here the practitioner has placed before him, and at a very moderate price, the cream of all the medical literature published during the past year, and in such form that it is readily digestible. As a compendium of medical and surgical progress, it will prove invaluable; for the practitioner anxious to keep abreast of the advances in the subjects treated, it will be of the utmost assistance. The text, as usual, contains a number of illustrations of practical value; there are also nine insert plates of much excellence.

MATERNITAS, a book concerning the care of the prospective mother and her child, by Charles E. Paddock, M. D., Professor of Obstetrics, Chicago Post-Graduate Medical School; Assistant Clinical Professor of Obstetrics, Rush Medical College. Cloyd J. Head & Company, 40 Dearborn street, Chicago.

This is an attractive little work which is intended to supplement the instruction given by the physician and trained nurse. It seeks to impress upon the mother who reads it the importance of coöperating with her physician and of early consultation with him on all matters which properly demand his attention in connection with the care of herself or child.

ELECTRO DIAGNOSIS. Scheme for the Differential Testing of Nerves and Muscles for use in diagnosis, by J. Montgomery Mosher, A. M., M. D., Clinical Professor of Insanity, Neurology and Electro-Therapeutics, Albany Medical College; attending specialist in Mental Diseases and physician to the Out-patient Department for Nervous and Mental Diseases, Albany Hospital: illustrated. Brandow Printing Company, Fort Orange Press, Albany, N. Y., 1903.

This is a carefully prepared little work giving the details of the technic of electro diagnosis and also a set of tables and plates illustrating the advantages and methods of using electricity for diagnostic purposes.

THE URINE AND FECES. A practical Manual on the Urine and Feces in Diagnosis. By Otto Hensel, Ph. G., M. D., Bacteriologist to the German Hospital, New York, and Richard Weil, A. M., M. D., Pathologist to the German Hospital, New York, in collaboration with Smith Ely Jelliffe, M. D., Ph. D., Instructor in Pharmacology and Therapeutics, Columbia University; Visiting Neurologist, City Hospital, New York. In one octavo volume of 334 pages, illustrated with 116 engravings and 10 colored plates. Cloth, $2.75 net. Lea Brothers & Company, Publishers, New York and Philadelphia, 1905.

With the rapid growth of the use of precise methods in diagnosis the value of a manual of this kind becomes more and more evident. The authors, from their large hospital experience, are peculiarly fitted to furnish exactly the information that is most valuable. The progressive physician will find this volume an indispensable assitant.

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Society and Association Proceedings.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART.

BY STARLING LOVING, M. D., COLUMBUS, O.

The study of diseases of the heart is always interesting; the more that, notwithstanding the labor which has been expended, much remains to be learned concerning them. We commonly regard them as functional or structural, but the distinction has not been accurately drawn. Functional disorders, except in rare cases in which the heart becomes somewhat hypertrophied, are unattended by anatomical changes. They are secondary to general affections, as chlorosis, neurasthenia, and chorea, or reflexes of disease in some other organ, as the stomach. Whatever its nature or location the primary malady is generally chronic in type.

Structural diseases are mostly part of, or secondary to, general affections, acute or chronic, as rheumatism, arteriosclerosis, alcoholism, Bright's disease, scarlatina, pyemia, syphilis, and over-exertion. Rarely we find a case of hypertrophy or valvular incompetence which *seems* idiopathic and without connection with other malady.

Structural diseases include atrophy, hypertrophy, and valvular lesions. Diminution in bulk and weight in atrophy, like increase in hypertrophy, varies, but not to the same degree. In extreme atrophy (always secondary) the heart is reduced to somewhat infantile proportions, while in hypertrophy the increase ranges between one and thirty ounces (the "Cor Bovinum.") An increase from ten ounces, the average normal weight, to twenty-seven or thirty ounces is not uncommon (Quain.) Fatty degeneration, though commonly a part of a general condition, may be strictly local. The heart is diminished in bulk and weight but not to the same degree as in atrophy.

It is not difficult to estimate the force of the contractions of the heart by the movements of the arteries and its impulse; but in some cases we fail to comprehend clearly the cause of variation in the one and in the other. We understand the rhythm of the action of the organ but the causes of the disorders thereof are sometimes obscure. Who, for example, has adequately explained the causes of those cases of angina pectoris in which no structural lesions can be detected on post-mortem section? tachycardia in Graves' disease? the intermittent pulse of the aged? the arrhythmia of hysteria? the slow pulse of jaundice? or the change in ratio between the respiration and the pulse in pneumonia? We comprehend the etiology of most cases of endocarditis and consequently of valvular lesions and of pericarditis and myocarditis, but there are some cases of each of which the causes can not be traced and it is to be feared that we do not at all times discriminate accurately between irremediable conditions and such as are in some measure controlled by the influence of remedial agencies.

That treatment may prove effective something akin to correct diagnosis is a necessary preliminary. To this end one must consider all of the conditions present in the individual case. We naturally seek first to ascertain the existence of a lesion, its location and extent; second, its duration, whether it be primary or secondary to disease elsewhere, and whether it is stationary or progressive; third, the condition of the muscular structure of the heart, whether atrophied, hypertrophied, or otherwise changed; fourth, the condition of the arterial system, determined by the presence or absence of indications of degeneration; fifth, the condition of the other internal organs, of the tissues generally, and of the nutrition; sixth, the disposition, temperament, habits and occupation of the patient.

Satisfied concerning these points, we remember that extensive lesions of the valves with moderate hypertrophy, may exist many years without inconvenience to the subject, and without his knowledge; but when the myocardium becomes greatly hypertrophied and enfeebled and its contractile power diminished, or, in other words, when compensation is weakened or lost, symptons, as irregular or tumultuous action, a feeble, irregular, or abnormally strong pulse, dyspnea, cough, hemoptysis, gastric disorder, enlargement of the liver, disturbance of the functions of the bowels and kidneys, edema of the lower extremities, dropsy on the abdomen, abnormality in the functions of the nervous system, one or several, appear, and are to be considered.

By considering the whole we are ordinarily enabled to decide whether the case is one of functional or organic disorder; and to form an idea of its probable origin and the appropriate treatment.

Whatever the symptoms, local or general, our attention, from habit, is drawn first to the pulse, and finding it abnormal, next to the heart to find the cause of variation. We apply the ear or phonendoscope to discover the existence or non-existence of murmurs, and if murmurs are present their location, intensity, pitch, duration, and quality; by palpitation we endeavor to estimate the force of the impulse and changes in the apex beat. By percussion, or better by ausculto-percussion, we discover increase or diminution in the the area of the heart's dullness and estimate the degree of the change in the bulk of the organ. The patient should be examined in the recumbent, sitting and erect posture.

The diagnosis of functional disorders is not, ordinarily, difficult. We are in some cases unable to find the cause, and may mistake endocarditis or myocarditis in the early stages for functional derangement, but functional diseases are usually secondary to other maladies and the history of the case with examination of the heart suffices for discrimination. In most cases there is tachycardia, arrhythmia or (very rarely) bradycardia. The sounds of the heart; except in chlorosis and chorea, though frequently accentuated, are normal. The impulse is occasionally increased but usually diminished in force, while the area of the heart's dullness is normal. The murmurs of chlorosis which are systolic in time, differ from those of organic origin in that they are not constant, but cease when the patient is at rest or when the heart has been excited to unusually strong action; and in that they are occasionally heard in modified form over the jugular veins, especially the right. The murmurs of chorea are occasionally purely functional but according to present belief more commonly due to roughening of the surface of the endocardium and of valves by changes incident to inflammation. Murmurs heard in typhoid fever and those consequent upon secondary anemia are faint and heard only with the first sound.

The diagnosis of structural disorders is not quite so easy, but not always difficult. That is, though we may fail to locate the lesion precisely and to form a correct estimate of its significance, we do not fail to discover that there is a murmur or that there are murmurs more or less constant, change in the rhythm, the impulse, and often in the area of the heart's dullness.

Murmurs, except in chlorosis, occasional cases of secondary anemia and dilation of the heart, ("accidental murmurs"), indicate structural changes in the endocardium, or in a valve or valves of the mitral, aortic or tricuspid orifice. Their pitch, intensity, duration, and quality are not of special significance, but it may be said that accidental murmurs and those which attend incompetency of the mitral or tricuspid valves have low pitch, long duration, and a soft bowing quality. Obstructive murmurs, on the contrary, are high pitched, of short duration, and sometimes more or less musical and so loud that they are audible to the subject and persons nearby. Mitral murmurs are heard during the systole, can be more accurately distinguished over the apex and at the junciton of the fourth rib, are transmitted around the left side, and, when the lesion is extensive, heard on application of the stethoscope over the left subscapular region almost as distinctly as over the apex of the heart. They are less distinctly audible at the base.. Mitral obstructive murmurs are systolic or presystolic in time, are not transmitted to the left nor above, and sometimes cease for a brief period when the patient is in the recumbent posture. Aortic murmurs are heard most distinctly over the right intercostal space (the aortic space) are transmitted above along the carotids and below along the abdominal aorta. They are more commonly harsh in quality. Aortic obstructive murmurs are systolic, while aortic regurgitant are diastolic in time. Tricsupid murmurs, when they can be detected, are heard over a limited circular space embracing the length and breadth of the lower half of the sternum and are not transmitted far in any direction. In general, when the mitral or tricuspid valves have become incompetent and compensation is injured or lost, the pulse is small, weak, though occasionally rapid, ordinarily slow, often irregular, and sometimes intermittent. In tricuspid disease the external jugulars are diated and often pulsate almost synchronously with the systole of the heart. In aortic stenosis the pulse is delayed, sometimes intermittent, and between beats soft and full. In aortic regurgitation it is bounding (the "Corrigan" or "trip-hammer" pulse). The pulsations are appreciable not only in the carotid and temporal but in arteries of little more than capillary size, as those of the finger-ends. When the heart is much dilated the pulse is weak, irregular and often intermittent.

Diagnosis of lesions of the pericardium is not always easy. I have frequently found it difficult. They are not so common as endocardial and therefore not so often suspected. Though comparatively rare they are not uncommon and because so frequently of serious import always excite interest.

When in the course of an attack of acute rheumatism, or one of pneumonia (especially if the lesion be located in the left lung), there is sudden increase of general disturbance with increase in the frequency of the pulse, one almost naturally seeks to ascertain whether change has not occurred in the endo- or pericardium. As already seen, inflammation of the endocardium is indicated by the development of adventitious sounds or murmurs, and the location of the lesion is not very difficult; but when the pericardium has become inflamed there may be no positive symptom for guidance. There is increase of temperature, greater respiratory distress (dyspnea is not a prominent sympton of rheumatism not involving the heart). There is possibly pain in the precordial region, maybe under the sternocleidomastoid muscle, somewhere near the axillary border, or in the epigastrium, which may be sharp and distressing or dull and diffuse; or pain may be absent and there may be only a sense of general discomfort with hyperesthesia and tenderness on pressure over the heart. There is sometimes nausea and vomiting or dysphagia, which may be accounted for by the attachment of the pericardium to the esophagus. There is often cough not before existing, without expectoration; or in case the heart lesion is due to infection from the throat or lungs an increase of cough but no special change in the expectoration. There may be headache with insomnia or delirium. The patient may be unable to maintain the recumbent posture or cannot lie on the affected side. But none of these symptons may be present, and except for increase in dyspnea and in the frequency, with perhaps change in the pulse, there may be nothing to direct attention to the heart and no lesion may be suspected until we are forced by increase of dyspnea and rapidly developing general prostration, unaccountable from pre-existing conditions, with feebleness and irregularity of the pulse, to examine that organ.

Even careful examination, provided the changes are not very great, is not in every case conclusive, for if it be made two or three days after the invasion, the friction murmur—the characteristic to and fro sound—present during the first few hours or days, has disappeared. If effusion is not great and the endocardium be not involved there is no appreciable alteration in the rhythm or in the sounds, nor is there great increase in the area of the heart's dullness.

Mistakes occur more frequently in cases of pericarditis complicating pneumonia, typhoid fever, and nephritis than when the lesion arises from other causes. In typhoid fever invasion of the heart is very often insidious, and symptons of distinctive character are absent. In nephritis hypertrophy is so common that after the first examination attention is frequently not attracted to the heart. In pneumonia dyspnea is always prominent though the heart is not affected, and increase in the frequency of the pulse, with some irregularity, is not uncommon, so that unless one is constantly on guard the cardiac lesion may not be suspected until the post-mortem. Because of the new symptoms which accompany its development, error is not so common when pericaditis occurs during the course of rheumatism or scarlet fever.

It is not easy in every case after the first stage to distinguish between dry or exudative peracarditis, and that attended with fibrino-serous or serous effusion; more especially when, as happens in the larger number of the former, the myocardium is involved and the heart enlarged Nor is it at all times easy in cases in which the myocardium is inflamed to distinguish between pericarditis and endocarditis; for in the course of pericarditis when the myocardium is invaded endocardial murmurs are occasionally present. But when attention is attracted to the heart soon after the invasion and before effusion the characteristic superficial rasping to and fro sound is to be heard. That sound is equally intense with the first and second sounds of the heart, audible during inspiration and expiration, continues *when the breath is held,* and thus can be distinguished from endocardial murmurs on the one hand and the friction sound of pleurisy on the other. But the friction sound of pericarditis disappears in every case within a few hours or a few days after the invasion and we are without the aid derived from its existence. To be sure it sometimes reappears when the effusion has been in great part absorbed but it is then too late for a creditable diagnosis.

When attention is called to the heart after a large quantity of serous effusion has accumulated in the pericardium we find respiratory distress, orthopnea, feeble circulation, cyanosis, great increase in the area of the heart's dullness, change in the impulse, and indistinctness of the sounds. The sounds may be normal but seem farther away from the ear than is normal, as is actually the case.

Pericardial may be distinguished from pleuritic effusion by the central position of the area of dullness and its boundaries; the location of the changes in the vocal and respiratory sounds; the character of the pain and of the cough. In my opinion, inflammatory affections of the pericardium, from whatever cause, are more difficult of diagnosis than similar affections of the endocardium.

The treatment of functional disorders is essentially that of the primary condition in which they originate.

Graves' disease, though tending in twenty-five per cent. to favorable termination, without interference, occasionally amenable to the influences of protracted rest in bed, small and frequently repeated doses of sodium phosphate; the Faradaic current, or an operation; is often refractory and terminates eventually in death. Hysteria, except when due to chlorosis, secondary amenia, or a local cause, as it frequently is, is almost equally refractory, but the greater number of cases of neurasthenia, including those of the sexual type, those secondary to chorosis, secondary anemia, excesses of various kinds, are curable by rest and appropriate food, with the influence of iron and bitters; but it must not be forgotten that fatty degeneration of the heart occurs now and then in chlorosis and is occasionally the cause of sudden and unexpected death.

Paroxysms of angina pectoris are controlled best by hypodermic injections of morphine or of adrenal chloride; chloroform by inhalation, and sometimes by the effects of amyl nitrite, nitroglycerine, and the stimulating influence of artificial heat, but as sooner or later the paroxysms recur the prognosis is uniformly grave. The paroxysms of false angina are controllable by the influences of the bromides, valerian, Hoffman's anodyne, hyoscyamus, and speedily by morphia, which latter no one will administer until other remedies have failed.

The coffee, tobacco, and broker's hearts, so called, are easily curable provided the sufferers can be induced to abstain and submit to appropriate treatment. Tobacco is unquestionably the cause of cardiac disturbances in rather numerous cases among susceptible subjects, but it may be doubted whether, except in the minds of medical cranks, parsimonious housekeepers, economical landladies, manufacturers of Postum Cereal and similar nostrums, *coffee* ever occasions a degree of disorder of the nervous system, direct or reflex, sufficient to disturb the functions of the heart. It is true that the vile decoctions so commonly used under the name are among the causes of gastric catarrh followed by derangement of the cardiac nervous system, but the pure article has no such influence. And if brokers and men engaged in other commercial pursuits would eat better prepared and more digestible food, drink less whisky, beer, and other alcoholic compounds, work fewer hours, take longer vacations, and get more sleep at regular hours, there would be but few cases of so called "broker's heart."

Reflex functional disorder of the heart is one of the many unpleasant accompaniments of that form of dyspepsia arising from subacute and chronic gastric catarrh, so common as a result of errors in diet and the abuse of distilled liquors. This form of dyspepsia has been called the "American disease;" but when we examine the literature of the subject we find that it is not more common here than in other countries, nor is it true, as has been asserted by European and some of our own writers, that we are more imprudent than others in regard to eating. But it is true that chronic gastric catarrh is more common in those sections of our country less advanced in the art of cooking and other refinements of civilization. For example, during a visit some years ago to the state of West Virginia I became acquainted with a highly intelligent member of our profession engaged in practice in the mountains of the interior of that state, and on inquiry as to the character of his practice got the reply that he had "little except dyspepsia and obstetrics."

Disorder of the heart resulting from disease of the stomach is proof of a general neurasthenic state with exaggerated imagination, and is associated with gastric pain and distention from gases. Between meals the patient may imagine he has disease of the liver, that he is threatened with apoplexy, pulmonary tuberculosis or cancer, but soon after the next meal his attention is again directed to his heart.

Persistent tachycardia, sometimes accompanied by systolic murmurs, frequently a source of discomfort during and after convalescence from typhoid fever and some other acute febrile diseases, is more commonly functional and due to weakness of the myocardium and anemia, but is sometimes the result of myocarditis. The prognosis in both conditions is good but fatal collapse sometimes follows undue exertion in either. For the former condition, rest in bed, nutritious food and a soluble preparation of iron with digitalis or strychnia, while in the latter, rest, iodide of potassium, with tonic, are appropriate remedies.

Disorder of the heart recognized by murmurs, and sometimes irreguar action common to most cases of Sydenham's chorea usually disappears on the cessation of the spasms of the voluntary muscles: but when dependent upon endocarditis the murmurs remain after all other symptons have disappeared and become permanent. Until it is plain that there is endocarditis no special change of treatment is required, and unless from arsenic, the great remedy for chorea, or the iodides, it is not certain that benefit results from medicines supposed to have specific influence on the inflammatory processes.

The prognosis and treatment of structural diseases of the heart, of whatever origin or nature, are governed more by the strength of the cardiac muscle than anything else. It has been seen that extensive lesions of the valves with appreciable hypertrophy of the heart may exist many years without inconvenience and without the knowledge of the subject, and so long as the organ retains compensatory power sufficient to propel the bood with something near normal force, there is very little disorder, local or general; therefore forecast and treatment, except in a few cases, are based almost wholly upon the contractile strength of the myocardium.

The treatment of endocarditis in the acute stage, and consequently of valvular lesions, is essentially that of the general malady of which they are part. Thus in the management of the most common form, rheumatic endocarditis, we can add little or nothing to the treatment appropriate for acute rheumatism. Ordinarily we increase the dosage of the salicylates, or other anti-rheumatic remedies, and await the results.

Neither local depletion nor the application of blisters, the latter so often followed speedily by relief in pericarditis, is beneficial nor do we gain so much as in the treatment of pericarditis by the influence of mercury and that of the iodides.

When the malady is of the malignant, or so called idiopathic type, the result is not appreciably influenced by medicines. Suffering is mitigated by anodynes and life prolonged possibly by stimulants, but recovery is hardly to be expected.

When secondary to pyemia, if the patient survives the brunt, the symptons usually subside with those of the general malady, but there is no known mode of treatment by which the course can be certainly arrested. I have within the past year seen two cases of general infection by streptococci with cardiac murmurs, in which the antistreptococcic serum seemed to exercise directly curative influence upon both general and local conditions. If the serum with stimulants and opiates fails, we are forced to rely on the vis medicatrix naturae and hope.

Muscular exertion should be avoided and rest in the recumbent posture enforced until convaescence is complete.

The treatment of acute pericarditis is modified somewhat according to the cause. In the larger number of cases the pericardial lesion is merely a local manifestation of acute rheumatism and better results are obtained from the influences of the salicylates and an occasional medium dose of calomel with saline laxatives than from other internal remedies. When the first or more acute stage has passed if inflammation is not subsiding and effusion continues to increase the iodide of potassium should be substituted for the salicylates and if deemed advisable, the mercurial may be continued. In order to sustain the flagging heart digitalis in suitable form and dosage should be added.

When the infection is secondary to pneumonia, scarlatina or typhoid fever the general strength is reduced and the salicylates cannot be used with the same freedom as in rheumatic cases and the iodide of potassium is prescribed alone. It should be given internally in medium doses and applied to the percordium in the form of ointment made with dehydrated lanolin.

Some think benefit results from local depletion by means of leeches and the application of ice-bags, but better results are obtained before and after effusion by counter-irritation from a cantharidal blister.

If effusions continues to increase, digitalis may be given more liberally alone or reinforced by one of the more direct renal stimulants, as the acetate of potassium, diuretin or theocin —I prefer the latter. When diuretics fail the aspirating needle should be used, but as aspiration is not free from danger it should not be undertaken without careful consideration.

The treatment of myocarditis is usually that of the peri- or endocardial affection of which it is part. The heart in its weakened condition cannot fully respond to the influences of digitalis, strychnia, spartein, etc, as in cases in which the myocardium is intact or but slightly involved. Nevertheless, while contractile power remains heart tonics are useful in forcing the blood onward and in assisting venous return.

The treatment of aortic lesions differs somewhat according to their character. Aortic stenosis, possibly the least harmful and dangerous of all valvular lesions, unless it interferes materially with the passage of the blood, causes little trouble and requires no treatment except prudence in eating and drinking and in exercise. We cannot remove the constriction nor "arrest the process of nourishing," but when progressive and general disturbance results, medication of some kind is demanded. When the lesion is due to syphilitic infection full doses of the iodide of potassium often yield results little short of the marvellous; but when of rheumatic origin, due to arteriosclerosis or gout, the iodide is to be preferred to other medicines, but neither the iodide or other remedy exerts complete control.

When the constriction is great and the pressure upon the mitral valves so strong as to render them incompetent, and dilatation of the right ventricle with attendant hyperaemia of the lungs, etc., follows, carefully regulated exercise with strict attention to diet and drinks helps to prolong existence, but the heart tonics, digitalis, strychnia, and spartein, though they do some good by stimulating the flagging muscle, are not so beneficial as in mitral lesions. If the case be not carefully selected, those remedies, if administered in large doses, are very dangerous. We accomplish more in preventing hypertrophy and secondary dilatation by attention to the general conditions of health, and having the patient avoid over-exertion, fatigue, and mental worry than by medication.

When there is accidental debility and the blood is deficient in hemoglobin (more frequently the consequences of intercurrent disease, as typhoid fever), the appetite defective, and the digestion poor, iron and the bitters, especially nux vomica or strychnia, are indicated and undoubtedly do good.

When the myocardium has begun to undergo degeneration and its contractions have become feeble, and there is precordial pain with dyspnea, notroglycerin, soution of adrenal chloride, the nitrite of amyl, or the nitrates of erythrol or manitol, by lessening the arterio-capillary resistance and placing the stress on the left ventricle, afford some relief to both general and local symptons. (Broadbent.)

Morphine, by a different mode of action accomplishes somewhat the same end but is not so useful as in mitral diseases.

The effects of aconite, which one would naturally think indicated, inasmuch as they lessen contractility and cause dilatation, are rather often attended with disastrous results, as fainting, feeble pulse, and profound prostration.

Aortic incompetence is recognized by the loud prolonged murmur caused by the backward flow of blood into the left ventricle during the diastole of the heart. The location of the murmur, its diffusion, with the peculiarities of the arterial pulsations in distant parts. have been pointed out. I will only say in this connection that the full, bounding quality of the pulse with the delay and distinct intervals, especially between the pulsations of the heart and those of the carotid and radial arteries, not changed by raising the arm above the head, is highly diagnostic. One can almost always distinguish aortic from mitral incompetency by this simple operation alone. Whereas when the arm is raised, the pulse, if the aortic valves are defective, remains unchanged or seemingly stronger, it becomes more feeble or ceases when the mitral valves are incompetent.

Associated with the peculiar pulse there is dyspnea, precordial pain, attacks of syncope and vertigo; and apoplectic seizures are not uncommon.

The treatment is governed, but not materially, by the cause, and the age of the patient. Much depends on care or the lack thereof. Strict obedience on the part of the patient is of great assistance, while "a single rash act may cause, especially in the early part of the course, instantaneous death, in a case in which life with reasonable comfort might have been prolonged for years." The importance of absolute rest in bed for weeks after the lesion has been discovered, especially when it occurs suddenly during an attack of rheumatism, is apparent, and no more than moderate exercise should be permitted for eight months or a year. A positive cure follows in rheumatic cases if adequate rest with proper medication is enforced and great benefit inures from the iodide of potassium when the lesion is of syphilitic origin. "The patient, if he would escape sudden death or death within a day or two, must be made thoroughly familiar with the danger of hurry, over-exertion, mental and emotional excitement: something may be accomplished by rest."

The distressing dyspnea, pain, fits of fainting, and insomnia, which, one or all, are sure to develop when compensation fails, are best relieved by absolute rest and sustaining the heart by nourishment. Alcohol in moderate quantities (the stronger wines are to be preferred to distilled liquors), strychnia, brucine, compound spirit of ammonia, Hoffman's anodyne, and atrophia are all useful. If digitalis or strophanthus is prescribed, as either may do much harm, caution should be exercised; and the same may be said in regard to spartein.

Morphia by hypodermic injection is perhaps superior to any other remedy, but, if it causes nausea, its administration may be followed by syncope and death. When administered by the mouth it usually fails.

Hyoscyamus and the bromides are useless and chloral possibly dangerous. Arsenic is beneficial, and some recommend phosphide of zinc and phosphorous, but I have had no experience with the latter drugs.

When symptons, as dropsy and enlargement of the liver (both uncommon) appear, new, or additional remedies are required. Saline purgatives and diuretics must be prescribed, but care must be exercised in selection. Digitalis is often used and often effective alone but I think it better to associate with it other and more direct diuretics, as the acetate of potassa, diuretin or theocin. Diuretin and theocin seem to strengthen rather than weaken the heart and are not dangerous. Either alone, especially theocin, often excites an enormous flow of urine, attended in some cases with nausea, but ordinarily with no disturbance. Theocin is given in doses of two to four grains dissolved in water, of which a large quantity is required for solution, at intervals of two and a half or three hours. Spartein, or the broom decoction, is preferable to digitalis.

In the management of mitral incompetency, it is necessary to keep in mind its many causes and various degrees. It is by far the most common heart lesion, and is the cause of terrible suffering. The change in the valves consists in mere weakness and relaxation, deformity varying in degree, or destruction of one or the other curtains.

The lesion is more or less controllable by treatment and in some cases susceptible of cure, but in the larger number the eventual termination is in death, not sudden as in aortic lesions, but slow and from complications, as pneumonia, enlargement of the liver, or dropsy. The remedies are regulated exercise, rest, appropriate feeding, with digitalis and other heart stimulants, diuretics and saline purgatives.

When the lesion is due to chlorosis, anemia, or a fever, as typhoid, or pneumonia, and consists partly in narrowing of the mitral orifice, rest alternating with carefully regulated exercise, ferruginous and other tonics, as nux vomica or strychnia, roberant diet and saline laxatives suffice for a cure at the end of a few weeks, months, or a year. Change of climate is often of great benefit.

The various symptons due to hyperaemia are to be met by the use of purgatives, diuretics and heart tonics. I have no confidence in the lily of the valley nor much in the widely advertised cactus.

Digitalis is more generally prescribed and deserves all that is claimed for it. I think too small rather than too large doses are used, but it should never be forgotten that it is a formidable poison. Like strychnia, it is a somewhat honest drug and when the danger line has been reached gives warning in a corded slow pulse, and diminution in the secretion of urine. Of the preparations, though the tincture is reliable, I think the simple, or compound vinous infusion is to be preferred. I have had no experience with the so called German tincture and have used the alkaloids less frequently than the tincture and the infusion but feel sure that digitalin is more efficient when used by the hypodermic method.

Strychnia is the remedy most popular and after digitalis the most reliable, but much can be said in favor of spartein and caffein.

Morphia is indicated and necessary for the control of pain and sleeplessness, and toward the end, becomes the sole reliance.

Dropsy is to be relieved by diuretics and purgatives or an operation.

PROPRIETARY THERAPEUTICS.

HORATIO C. WOOD, JR., M. D.

Demonstrator of Pharmacodynamics University of Pennsylvania; Assistant Physician to Philadelphia General Hospital; Physician to Henry Phipps' Institute; Member of the College of Physicians of Philadelphia, Etc.

Mr. President and Gentlemen:—I desire to express my appreciation of the honor you have done me in inviting me to address the Columbus Academy of Medicine.

Perhaps I should also apologize for attempting to say anything new on such a well-worn subject as the expediency of using proprietary drugs. Let my apology be the conviction that the increasing prevalence of the use of these remedies is exceedingly detrimental to the best interests of the medical art.

I wish to consider this evening that class of agents, commonly called nostrums, which are mixtures of several more or less well-known ingredients the use of which threatens to relegate prescription-writing to a place among the lost arts. My remarks in no way refer to definite chemical compounds which may be the property of some manufacturing druggist, for while I am by no means certain that the introduction into medicine of these products of chemical ingenuity has been altogether an unmixed blessing, any opposition to them is founded on grounds essentially different from those which form the basis of my protests against the pharmaceutical nostrum whether parading in its true guise or attempting to hide its real character behind that magic Shibboleth, synthetic.

The great fundamental objection to the use of proprietary mixtures is an objection to all set and unalterable formulæ. Disease offers an ever shifting picture, never presenting precisely the same problems in any two instances, varying from day to day and perhaps from hour to hour in its morbid manifestations and unless our treatment shall be capable of easy modification to suit the changing conditions, we cannot hope to accomplish the best results in our warfare against it. These set ormulæ are presumably constructed on the same plan as ready nade clothing which is made from a large number of measurements to fit the average man. As a matter of fact, however, the iverage man is non-existent and the ready-made suit can never it exactly. But clothing is one of the minor cares of life and he majority of us having something more important to think ibout are satisfied if it fits approximately well, but when we ire dealing in human health and it may be at times in human ife, can we justify our satisfaction with an approximately fitting emedy?

Another objection to these substances is their secret or semi-secret nature. Of those abominations which simply advertise a descriptive title and the assertion that what not "is a pecific in all forms of" this or that (you know the type), it eems almost unnecessary to speak. We preach to the laity of the evils of self-medication; but I confess that it does not eem clear to me why the child-like faith of a sick man in the eracity of a nostrum advertisement in the daily press is any ess rational than the child-like faith of the doctor in the same ort of an advertisement in a medical journal. Indeed, the employment of these fancy-named specifics is a direct temptation o self-medication. In the show windows of one of those so-alled drug stores whose chief business is the sale of soda-water nd silver-ware with patent medicines as a side line, recently was xhibited Gudes' pepto-mangan flanked on one side by Killmer's swamp-root and on the other by peruna catarrh cure. much more elusive and therefore more dangerous evil lurks n that class of mixtures which attempt to cloak their secrecy ith a deceptive show of frankness. I think you will grant me hat the physician is rarely justified in the use of remedies conerning which he has no knowledge and I maintain that the ublication by a drug firm of whose integrity you are absolutely gnorant, of a professed list of ingredients of some mixture is ot sufficient knowledge to pardon the use of that remedy. In he first place if the published formulæ were correct it is not nough to know simply what composes a mixture, we must now how much; there is a vast difference between one gram nd one hundred grains. Moreover, we have no means of nowing that the published list is a correct one for many of these orporations have no hesitancy in perverting the truth. For example of a widely known anti-rheumatic mixture it was formerly proclaimed in flaming head lines that it contained no salicylic acid, but today the manufacturer sells it as a palatable preparation of sodium salicylate; another advertised as Passiflora tablets has recently been shown to contain a notable amount of acetanilid.

The common defense of the secret nostrum is based on its value as property. As a typical example I quote from a recent editorial in an evidently subsidized medical journal, the writer says: "The manufacturer who perhaps has spent hundreds and thousands of dollars in perfecting the formula, cannot be expected to give gratuitously the product of his time, thought and money." I ask you how have these hundreds and thousands of dollars been spent? Can a pharmacist hire men to be sick that he may experiment on them with varying combinations of drugs? Does he dare insinuate that the medical profession is ready to barter in human suffering for the enrichment of the nostrum vendor? No, gentlemen, the hundreds and thousands of dollars have been spent in suborning medical journals to land some hit or miss formula thrown on a drug factory in the form of a pill sugar coated with deceit and falsehood.

The defenders of these conglomerations hint vaguely at a wonderful augmentation of beneficial powers, the result of some mysterious manipulation, of some supernal pharmaceutical skill which has overturned and transformed the properties of a well known drug. Are we as reasonable human beings expected to believe such twaddle carrying us back to the dark ages when the black art and fetichism were blood brothers of medicine? What remarkable pharmaceutical ability does it require to triturate together acetanili and salicum bicarbonate, and press them into a tabet stamped with a symbolic initial? Can you tell me how the addition of potassium bromide and the extract of hyoscyamus makes chloral hydrate "the safest hypnotic known?" That manufacturers often realize the absurdity of such claims is shown by the number of those who manifest a desire to pose as "ethical" by the publishing of a pretended formula, and yet attempt to obscure the real nature of their mixtures by the use of uncommon names for well known drugs or by including some plant of which the ordinary physician has probably never heard. The inference, of course, in the latter case is that this rare ingredient is possessed of wonderful healing properties that renders the peculiar combination beyond the possibility of imitation. Does it seem probable that if this mysterious plant did possess any such virtues as are ascribed to it, it should have flourished for these thousands of years and escaped the notice of generations of practical physicians, of studious scientists and far-wandering botanists? We may rest assured that any substance having such remarkable powers would have been known to some member of the medical or pharmaceutical professions, and would have found entrance into that magnificent collection of real medicaments, the United States Pharmacopoeia.

Here is an advertisement of a mixture intended for an emmenagogue, which it is stated "contains champaca, abroma-fastuosa, ferrum, ruta and apid." To the uninitiated this seems a truly wonderful aggregation of unknown and therefore potent remedies. But let us investigate. Champaca or champac is an Oriental tree of the magnolia family, whose greatest claim for immortality rests upon the fact that the poet Shelley has introduced it into his famous song called "The Indian Serenade." It has been shown, however, to contain a substance closely allied to camphor. The second ingredient which is printed as one word apparently for the purpose of deception, is evidently the botanical name of a plant. Now the genus Abroma was recommended in the treatment of dysmenorrhea as far back as 1873, but it apparently did not possess sufficient activity to deserve a place in practical therapeutics until some enterprising pharmacist thought to use it to disguise a not very remarkable abortifacient emmenagogue mixture. Of the other ingredients which you are probably acquainted with all that remains to be said is that rue is well known to possess emmenagogue properties but it is rarely employed today except for the production of criminal abortion. The physician who cannot compose a better emmenagogue mixture had better quit the practice of medicine.

Let me call your attention to one other example of this effort to confuse the unwary, the simplicity of which is really laughable. A very extensively advertised drug hailing like other orthodox fakes from St. Louis, is said to be "a palatable preparation of Panax Schinseng." Panax is the botanical name for the popular Chinese remedy ginseng, whose therapeutic value is about equivalent to that of licorice root. If you want licorice order the official extractum glycyrrhizæ.

No condition exists without cause and there must be some strong reason for so general a use of these preparations. It is incredible that mere convenience in prescribing can expain such a wide-spread popularity without some other influence at work. One great reason for the flourishing of this business is to be laid at the door of the profession directly, that is the ignorance of the action of drugs and of methods of combining them. The subject of therapeutics is all too imperfectly taught in our medical schools, while that of prescription writing is almost completely ignored. If you will look over the examinations of various state boards you will find lower marks in prescription writing than in any other subject.

The recent graduate is called on by his first patient, and he has asculeted and percussed the sick man from the tip of the ear to the end of the toe, he has counted the number of corpuscles in the blood, he has taken a sphymographic tracing of the pulse, he has made a microscopical examination of the sputum and a bacterial culture from the throat, he has tested the urine for acetone and the diazo reaction, he has determined the percentage of hydrochloric acid in the stomach—all these things have been taught him at his medical school, but no one has thought it necessary to teach him that refinements of diagnosis are but a means to the end of a more successful therapeusis. Perhaps his professor of medicine belonged to the sect of nihilists and taught "leave the patient to nature, and you will get an interesting autopsy!" But the young doctor realizes that his patient does not want an interesting autopsy, and that he must at least make a pretense of doing something, and while his eyes are roving round in thought as to what he can order, they fall upon a green and purple announcement received in that morning's mail that "Jones's creotin gives wonderful results." Feeling his incompetency and yet fearful of displaying his ignorance is it any marvel that he falls an easy victim to the blandishment of the blotter?

But the most potent factor, I believe, has been extremely lavish and often very shrewd advertising. I read recently an illuminating account of the establishment of a well known nostrum. The story goes that there was an advertising agent some years ago who was being twitted by a friend as to the uselessness of his calling. The specialist in publicity replied, "Why, you can sell anything with proper advertising," and proceeded to mix together some harmless ingredients, gave his concoction a high-sounding name, heralded the mixture broadcast throughout the land as a balm for all human woes and today is retiring from business a millionaire. We need not flatter ourselves that the medical profession is less easily duped than the rest of mankind; after all the doctor is human and there is much truth in the oft-quoted saying of the notorious circus manager that "people like to be humbugged."

A well-known physician in an investigation of this subject two or three years ago calculated that $600,000 were expended annually in advertising secret nostrums. Personally, I am inclined to believe that his figures are far short of the mark. The interesting question suggested by these figures, is where does the money come from? Those hundreds of dollars are coming out of your pockets and your patients' lives, and yet the medical profession is blind enough to continue uncomplainingly feeding these jackals that fatten themselves on human suffering.

Of course, the owners of secret remedies as of any other commodity have a perfect right to advertise their wares in any magazine which will publish them, and by common consent it is understood that advertisers are not bound by any ties of truth nor even probability, but a very grave danger threatens in this connection. The advertisers are not satisfied with exploiting their products in the back of the magazine; they clamor for "reading notices" and demand a censorship of the whole journal in their interests. You will recall the old story of the camel who on a cold night poked his nose into the tent of the Arab and besought that he might only warm his nose. Little by little he intruded his body until finally he possessed himself of the tent and the poor Arab sept out in the cold.

Using the value of their advertising patronage as a club to force complaisance, slowly but persistently the nostrum venders are possessing themselves of the medical literature. Soon our medical journals will be entirely given up to eulogizing proprietary remedies. I believe I am speaking very conservatively when I say that the reading columns of two-thirds of the medical journals of this country are controlled by the proprietors of various drugs. Only a couple of weeks ago the editor and owner of a so-called medical magazine told me that he had sold outright four pages of his reading columns to a certain manufacturing house, that is, he had contracted to allow them to print among the reading matter of his magazine four pages of anything that they pleased. It is not alone the smaller publications of purely local fame which have become entangled in this business; magazines of large circulation and high standing are in the snare of the fowler. Allow me to relate a personal incident. A short time ago I took an article which contained some unmodified truths concerning certain proprietary disinfectants to the editor of one of the oldest and most widely known medical journals published in Philadelphia. Noting the references to these he informed me that it was his unalterable rule never to publish or mention proprietary remedies in the pages of his journal. Thinking that he meant that proprietary remedies were things beneath the notice of so substantial a member of medical journalism, I assured him that I had certainly not sung the praises of these remedies and called his attention to one or two paragraphs in the article which he read over and then reached for the last number of his journal and said with a deprecatory smile, "Here is a whole page of advertisement of Platt's chlorides; were your article to appear they would withdraw their advertisement immediately. Here is half a page of Listerine advertisement. Doctor, I could not think of publishing your article unless you withdraw all mention of these substances."

Gentlemen, I say that if it has come to pass where reputable medical journals are afraid to publish the truth concerning proproprietary remedies, it is time to call a halt.

But after all this condition of affairs is not to be greatly wondered at. A body of men whose motives are purely mercenary are very likely to develop highly specialized consciences which do not respond to any of the ordinary moral stimuli. We need not be surprised, therefore, if whatever power they possess is used unscrupulously for the advancement of their own interests and the destruction of any opposition to the growth of this power. The most serious obstacle to the success of such aims is the force of public opinion, for I believe that wherever well informed of the real conditions, the sentiments of the people as a whole will ever be in favor of right and morality.

These men being not only venal but shrewd as well, recognize the necessity of poisoning our sources of information, and exert every effort to the debauchery of the medical press. They were even attempting to exploit the Journal of the American Medical Association, but that slow-moving body has finally aroused from its lethargy and the result has been the most hopeful suggestion that has yet been made for the relief of the profession. I refer to the proposed pharmacopoeia of unofficial remedies. Both the character of the committee in charge of this work and the preliminary report already published gives ground for hope that much good will be accomplished.

But so thoroughly has the work of corruption been done that even the erstwhile respectable New York Medical Journal has joined the ranks of the sophists who monotonously chant the same refrain: the right of the drug manufacturer to his property. But what interest have you or I as physicians in the value of that property? The moral strabismus of the medical press is comprehensible, for into their coffers there flows, in the form of advertising patronage, a constant dribble from these ill-gotten gains, but the obtuseness of the physician who continues to rob himself to enrich the nostrum monger is akin to that which exposes the country bumpkin to the lure of the shell-game.

CINCINNATI SANITARIUM.—The thirty-first annual report of the Cincinnati Sanitarium shows that the number of patients in the hospital during the last year was larger than that of any preceding year, there having been two hundred and ninety patients cared for. The daily average for the year was 87.67. While all of the patients were benefited ninety complete recoveries occurred. The results as thus shown are the best possible recommendation for the sanitarium.

ADDRESS COMMENCEMENT EXERCISES OF THE OHIO MEDICAL UNIVERSITY.

BY JOHN W. WRIGHT, A. N., M. D.,
Professor of Ophthalmology, Ohio Medical University, and Ophthalmologist Protestant Hospital, Columbus, Ohio.

I am privileged this evening in representing the faculties of this university that have had supervision of your professional education the past four years, for whom I am to deliver to you the parting words ere you are surrendered to the public, represented by this audience in waiting to receive you and congratulate you and wish you Godspeed.

I scarcely need say that the profession which you have chosen for a life's work is regarded as the most honorable and important of all vocations, and if you would succeed in making yourselves valued members of it, the time you have spent, the self-denials and deprivations you have undergone and the arduous application you have made are but faint introductions to that which will surely follow; for it will be well for you to remember that it is only the basis for the superstructure which you have acquired in the few years which you have spent in this university. To practice your profession aright, you must continue a lifelong student, and to be successful in all that it implies, requires a constant, unwavering, diligent and dignified course to this single purpose.

This does not signify that this work is slavish, that you are imposing upon yourselves a load difficult to bear and that you are closing yourselves in from your friends and the heathful, invigorating and soul-inspiring pleasures of the world. It is entirely different, for if you are interested in your profession, the work which you perform will be a labor of love. The success which follows in the wake of honest toil gives the most exquisite pleasure.

He who takes upon himself the responsibility of ministering to the afflicted should have the clearest conception of right and wrong. He knows more fully than can anyone else how the sins of the parents are visited upon the children of many generations; ;seeing what deterioration of morality has done in imposing suffering and misery on mankind, his every effort should be put forward to correct the great evils which are the cause of this demoralization, in enhancing public purity.

Let me remind you that you owe a duty to the state as well as to your patients. Your superior training, together with the unusual opportunities which you will have in knowing the needs of your community, will afford you, very often, occasions to be of inestimable service. You must declare in no uncertain terms for the regulation of contagious diseases, for pure drinking water, for the banishment of every resort whatsoever where health and morals are tainted and for the hygiene and purity of your municipality, no matter whom you may offend. Contend for honest, capable health officers, as against "store box" politicians and "ward heelers" who obtain their positions for their ability in manipulating a few voters, rather than their knowledge of hygiene. Some of the members of the sanitary police force of our cities are such travesties on the goddess of health that she would relinquish her title forever, if she were here.

While the physician should not be a politician in the sense usually implied, except in so far as good government is concerned, he will not be accused of "mixing in politics" as long as he works for honest, capable men, regardless of party. You must know that the principles enunciated by a party may be right, while the party itself may be rotten. The time has arrived when honesty and patriotism are regarded with far greater favor by the public than is politics. The official bureaus that deal with scientific problems, in all municipalities, should be taken entirely out of the hands of politicians; and it is the duty of every physician to use his influence to that end. The profession can, if it will, exert a most potent influence for mankind in the state. In this connection let me say that a problem will arise soon that is of national importance. It cannot be minced at nor evaded. It is bound to come and you cannot be prepared too soon to meet it. I refer to the laws regulating marriage. If we would banish many diseases, if we do not desire to see our alms-houses and asylums increasing in number and filled to overflowing, if we would have a healthful people and a pure nation, there must be restrictions regulating marital relations, which cannot *possibly* be too stringent. I beg you to be the leaders in this matter.

Another matter deserves your attention which must be regulated through the statutes also. I refer to the indiscriminate carrying of firearms and the reckless use of explosives on our national holiday. On Independence Day, 1903, statistics give a list of "466 killed, 10 persons totally blind, 95 eyes lost, and 500 other individuals maimed and disfigured otherwise." What a penalty for such stupendous folly. The argument that you would thus diminish disease and accident and thereby curtail your business is too utterly sordid to receive attention. On the other hand "you should be particularly distinguished as being free from the incentives of personal gain and selfish ambition to the end that suffering and sorrow be alleviated." Remember that you can aid the people of the nation, as none other can, to receive what they have a right to demand, for the relation of our profession to the public is greater at the present time than ever, because the work accomplished by the physician, not in sanitation alone, but along all professional lines, has been enhanced to such an extent that the public recognizes it and gives it encouraging appreciation.

Do not work the church, the lodge or politics for business. The physician or dentist or pharmacist who works a deceptive racket to obtain a business will not hesitate to swindle the patient when he gets him. Remember that the public is ever alive to such artifices and will detect him sooner or later. You would be pained if you knew what expedients are resorted to by some members of the profession to obtain business. This does not imply that the medical man should not take a cheerful interest in anything that will enhance the good of his fellowman and himself, but whenever his distinctive efforts are in some other direction, he should abandon his profession.

A recent medical journal makes the statement (be it to our shame) that a "terrible menace to the integrity of our profession is the commercial spirit which is so all pervading and so far reaching. It is seen in methods employed in promoting practice, in the acceptance of bribes for various purposes and the illegitimate working-up of cases beyond the province of necessity." The editorial intimates in words not to be misconstrued that members of the profession give stipulated commissions for patients sent them, and that the practice obtains alike with the physician, the surgeon, the dentist, the pharmacist and the specialists in all departments, who unblushingly pay fixed percents for patients directed "their way," in as much of a business manner as the railroad dispenses rebates. If you do not wish to bring discredit to yourselves consider what would be the feelings of a patient were he to have suspicion of it, who had been referred to a consultant for a price rather than for skill,

The physician, it is needless to say, cannot afford to be an accomplice in any such schemes, one way or another. "He cannot afford to place his profession on an equality with the domain of trade where questionable methods are practiced and deception is expected to be found." The dentist cannot afford to fill his patient's teeth with amalgam and charge for gold, nor can the pharmacist afford to substitute or use inferior drugs that a percent may be given the steerer. It is needless to remind you that such questionable methods have no place in this field where everything must stand on merit.

You all want to be successful, but it is well to consider methods, for success as a rule is made to imply the amount of money that has been attained, rather than as to how it has been amassed, or than what has been returned as an equivalent. If a noted person, or one who is known to have plenty of money, is suddenly injured or indisposed and you are called in the exigency to administer to his needs, should you demand an exorbitant fee simply because he or his friends have the means? Furthermore, should you demand, in addition to a respectable fee, hush money in any case that you accept to treat? You, claiming to be a respectable citizen, might as well act the highwayman and hold up one and relieve him of his purse in that manner. On the other hand he who possesses real merit and skill should, and can demand a just recompense for his services. Through your devotion to your profession make your services so valuable and so much in demand that you are eagerly sought, then you may claim indeed a copious compensation. Remember that the people recognize good professional service and are willing to pay for it, but treat them honestly.

It now remains for you to prove your adaptability to your profession. You must show under actual practice your capability. Remember that all do not succeed, but the majority do. You have much before you to stimulate you. Pioneers have cleared the way and if you commence where they left off, you can achieve much. There is at present an era of discovery and progress which promises for the future wonderful possibilities, to achieve which there must be on your part a continuous strenuous effort.

At the last meeting of the American Medical Association, thousands of dollars were raised in a few minutes for the purpose of erecting a monument to the memory of the late Dr. Walter Reed, who exterminated the yellow fever from Cuba. It is impossible to estimate the number of lives that have been saved and the vast amount of suffering that has been avoided and the good to future generations that has been accomplished through the efforts of Dr. Reed. This indicates the loyalty of the profession to one of its number who has done so much for humanity. It is time for us to realize that "while the heroes of the sword may be remembered, the heroes of humanity will be forever enshrined."

Remember that the better you are prepared to practice your profession, the greater are the duties which devolve upon you. You must know that you leave this institution a debtor; you owe an obligation to the public which you must constantly endeavor to discharge. That obligation is no less than the magnificent deportment of yourselves during life.

HIGHLAND COUNTY MEDICAL SOCIETY.—The Highland County Medical Society held its regular meeting July 5, 1905, at which papers were read by the following: Dr. C. C. Cropper, New Market, Ohio, "Care of Infants During Hot Weather"; Dr. J. N. Ellison, Sardinia, Ohio, "Tonsilitis"; Dr. H. A. Russ, Hillsboro, Ohio, and Dr. W. W. Glenn, Hillsboro, Ohio.

ST. ANTHONY'S HOSPITAL.—The thirteenth annual report of St. Anthony's Hospital of this city, just issued, shows 1,131 patients were treated in that hospital during the year ended December 31, 1904. Of the total number of patients, 739 were medical cases and 398 surgical and gynecological cases.

THE CURE OF CONSUMPTION BY FEEDING THE PATIENT WITH SUBCUTANEOUS INJECTIONS OF OIL AND ITS DIGESTION BY THE WHITE GLOBULES OF THE BLOOD.

BY THOS. BASSETT KEYES, M. D., OF CHICAGO.

Chairman of the First Organization Committee of the American Congress of Tuberculosis, and one of the Vice-Presidents of the International Congress of Tuberculosis, St. Louis, 1904.

By the method of treatment which I am about to describe in this paper I believe that consumption can be absolutely cured.

First, however, before entering into the merits of this treatment let us briefly consider the disease.

Tuberculosis is a disease of mal-nutrition, and while the presence of the germ confirms the diagnosis, before the germ can grow it must find a suitable soil, there must exist a pretubercular condition. It is estimated that we all breathe in a great many of these germs but that they cannot grow in a healthy, well-nourished individual. People who have consumption do not eat fats, oils and cream in sufficient quantities. The first requisite in an attempt to cure tuberculosis has been for many years to give the patient oils of various kinds and the most successful sanitariums of late years have adopted a process of food forcing, using the fats of meats, butter and cream as the principal foods to be relied upon to effect a cure, each article of diet being selected for its fatproducing and strength-giving properties. To this vigorous out of door life has been advocated, why? It promotes appetite and the out door life is conductive to place the body in condition for the absorption of more fats. I was one of the first to advocate tent life for the treatment of tuberculosis in two articles entitled: "Camp and Out-Door Life as an Aid to the Permanent Cure of Tuberculosis," February 21, 1900; and, "Some Results of Camp and Out-Door Life in Northern Wisconsin," Congress of Tuberculosis, May 15-16, 1900, and some four years ago I located an out-of-door camp for the treatment of these invalids in Northern Wisconsin.

To maintain nutrition has long been considered the prime requisite of cure and an increase of weight is an indication that nutrition is overcoming the disease, and as weight increases there comes strength, and the passing away of the other distressing symptoms, such as the products of the disease, expectoration of mucous, fever and finally cough. Professor Osler has stated that the arrest and cure of the disease is entirely a matter of nutrition and that the whole object of treatment is to so fortify the patient's constitution against the inroads of the disease that the indvidual cells of the body have the stamina to fight against and destroy the tubercle bacillus. Regarding tuberculosis Dr. J. H. Elliot, Canadian Journal of Medicine and Surgery, March, 1903, says that nutrition is dependent upon the proper assimulation of food, while improvement must be proportionate to the increase in the amount assimilated. All therapeutic measures, says Marfan, should be devoted to the end of nutrition and the earlier such measures are instituted the greater the prospect of cure. Without going further into the fact that the whole cure of tuberculosis up to the present time is dependant upon our ability to nourish the patient, except to say that the methods of Dettweiler, von Leyden and Hoffman of Germany depend upon results from nutrition, and to this end they have avocated forced diet regardless of appetite. If the patient was to recover he must eat. Out-of-door life was important in as much as it supplies to some extent the appetite.

Anorexia is one of the worst symptoms against the cure of tuberculosis. It is impossible to get the average patient to eat enough fats, and a person who has consumption is the one who leaves the fat from his meat, eats very little butter and little of cream and milk. When a patient is far advanced in the disease he is unable on account of this loss of appetite and nausea, to eat sufficient food to maintain nutrition, and therefore gradually declines as the disease advances.

In the above few words I have tried to convey the importance of nutrition in the cure of this disease, believing that the cure rests entirely upon our ability to so nourish the system and stimulate the cells of the body that they will throw off the disease.

THE DIGESTIVE POWER OF THE WHITE BLOOD CELLS.

Experiments have been conducted principally by the Italian physicians, and a few others, viz.: Gabrelschewski, Arch. f. Exp. Path. 1891, bd. 28. Czerny, Arch. f. Exp. Path. 1893, bd. 31; Leviertato, Arch. Italiano di Slinica Medica, n. 3, 1893; Tarchettia e Parodi, La Clinica Medica Italiana, n. 10, 1899; Kraminer, Berl. Klin. woch. n. 6, 1890; Oliva, Gazzetta degli Ospedali, 17 guigno, 1900; Tarchetti C. Sull, esistenza di un fermento diastace nei corpuscoli bianche, Gazzetta degli Ospedali, n. 90, 1900; Sull natura e sul significate della sostenza iodofila dei gloubuli bianchi, La Clinica Medica Italiana, n. 8, 1900; Di una pretesa degenerazion amilodea sperimentale, La Clinica Medica Italiana, n. 7, 1900; Richerche nulla degenerazione amiloidea spermintale, La Clinica Medica Italiana, n. 11, 1902; Porcile V. Sul valore semeiologico della reactione iodofilia nei purulenti, Gazzetta degli Ospedali, Milano, n. 102, 1900, which go to show that there is a glicogenic ferment in the cells which has the power to digest starches. These experiments have been carried on principally to discover a cause for the disease of diabetes. It has been shown more or less perfectly by some of these same observers that fats also may be digested by the blood, and that the white blood cells have the power of digesting oils, though these experiments according to Tarchetti, Clinica Medica Italiana, 1900, are not definite it is clear that the white cells of the blood possess a ferment or property which has the power of digesting fats and starches, and without going into the process, chemical, phagocytic, osmotic, etc., which has been gone into by Dr. Spezia in the numbers 5 and 6 of the Gazetta Medica Lombarda, 1904, for as Tarchetti, Gazzetta degli Ospedali, n. 28, 1904, says: Is it possible to follow the rapid course of the oil injected into the internal organism and the phenomena positively chemical, of osmosis, of phagocytosis, and of digestion intercelluar?

Upon the digestion of oils by the blood I base this claim for a cure of tuberculosis. So far I have tried to show, first, that the cure of consumption must necessarily depend upon a proper supply of nutriment, the disease being primarily a disease of mal-nutrition; second, that consumptives suffer so much from loss of appetite, nausea and perhaps non-absorption that as a rule they are unable to take sufficient amounts of fats to overcome the disease; third, that the blood cells possess a ferment capable of digesting fats.

I shall now give my results in the cure of tuberculosis by the subcutaneous injection of oil. The oil which I have selected in the treatment of my cases has been olive oil of a very high grade, thoroughly sterilized, using olive oil in preference to other oils on account of it being non-irritating and very readily accepted by the system. The point selected for the injection has been over the shoulder blades, injecting one day over one shoulder, and the next day over the other, excepting when a large amount of oil is used when it is necessary to inject over both. There is very little pain conected with the injection and the following day it is hardly possible to find where the injection was made. By being careful in my technique of cleanliness and sterilization, so far no infection has taken place and consequently no soreness, though I believe the non-irritating properties of the oil has a great deal to do with this. The amount of oil used varies. I commence by injecting 12 c. c. of oil each day and the htird day increase the amount to 24 c c. of oil. If no unpleasant symptoms arise I keep gradually increasing the dose to full tolerance of the patient which varies with the individual and the stage of the disease. Those who are poorly nourished will sometimes assimulate large quantities of oil up to about 200 c. c. daily. In this manner I have treated nine consecutive cases successfully, and within 24 hours after each treatment there is a remarkable benefit and amelioration of all symptons, such as diminished morning cough, night sweats, increased strength, and finally gain in weight| Some of the very worst cases of tuberculosis under this plan of treatment have gained each day and I believe have been thoroughly cured. The syringe which I use is an asperating syringe reversing the piston with a thum screw, it requiring considerable pressure to force the oil under the skin.

By injecting oil thus it is absorbed and assimulated by the blood cells and there is a great increase in their numbers. Thus all of the indications for the cure of tuberculosis are met. It overcomes the disease through increased phagocytosis and thus the active cells destroy the disease. Nutrition is re-established. The time required to overcome all symptoms is remarkably short and one will be greatly surprised at the benefits which come with each treatment. Physicians should use great care in the amount of oil given, for very large doses, if long continued, might result in fatty degeneration of certain organs, but with the disease, tuberculosis, this is not so apt to occur, as tuberculosis and fatty degeneration are antagonistic. I have based the claims of this treatment as a cure for tuberculosis from my experience and clinical evidence and from my conviction. I give my results this early, believing that the cure of tuberculosis is solved and that by so doing many lives will be saved. Of course, to the above treatment should be added all that has been found useful in the treatment of tuberculosis, principally of which is a forced diet of articles selected for their nutrition, such as meats, fats, butter and cream, out-of-door life and hygiene.

I hope and trust that physicians will at once take up this method of cure and I respectfully request that those doing so will communicate their results to me, as by broader knowledge much good may come and it is my desire to report these results.

THE DISEASES OF SOCIETY. (The Vice and Crime Problem.) By G. Frank Lydston, M. D., Professor of Genito-Urinary Surgery, State University of Illinois, etc. Publishers, J. B. Lippincott Company, Philadelphia and London. 1904.

The author expresses a hope that this volume may do a little missionary work for what he believes to be an important cause. The subject of sociology has attracted a great deal of attention of late years and this work will be both interesting and instructive along these lines.

While the reader will find a peculiar radicalism on certain topics, nevertheless he will find the arguments of the author based upon a careful study of the sociologic conditions as he has viewed them.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, June 5, 1905.

F. F. Lawrence, President. Chas. J. Shepard, Secretary.

Memebers present, thirty-six; visitors, six. Pathological specimens presented by Dr. Wardlow.

Dr. Sherman Leach read a paper on "Hernia." Discussion by Drs. Wardlow, Means and Carter. Dr. Wells Teachnor read a paper on "The Protoscope and Colonoscope in the Diagnosis and Treatment of Diseases of the Large Intestine." Discussion by Drs. E. A. Hamilton and Goodman. Dr. Starling Loving reported two cases of gangrene of lower extremity due to embolism from valvular disease.

The local committee of arrangements for the meeting of the State Medical Association recommended that the Academy make an effort to secure the next meeting of the Mississippi Valley Medical Society. Dr. Wardlow made a motion to that effect and a committee of three was appointed by the president.

Dr. O. McCollum was elected to membership.

Regular Meeting, June 19, 1905.

Members present, thirty-eight. Dr. C. F. Bowen gave a demonstration of an Electro Magnet.

Dr. Starling Loving read a paper on "The use of Proprietary and Patent Medicines by Physicians." Discussion by Drs. Dixon, Barnes and Rauschkolb. Dr. S. J. Goodman read a paper on "The Ethyls in General Anaesthesia." Discussion by Drs. Upham and I. B. Harris.

A motion prevailed that some prominent physician out of the city be invited to address the Academy at one of the early meetings of the fall.

Dr. J. J. Beekman of Columbus and Dr. A. W. Jones of Westerville were elected to membership.

THE COLUMBUS MEDICAL JOURNAL.

A Monthly Magazine of Medicine and Surgery.

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JULY, 1905.

Editorial.

TUBERCULOSIS.

There is evidently a growing interest in the subject of the prevention of tuberculosis. This is due in large part to the efforts of the Secretary of our State Board of Health and others who have been urging the claims of the subject upon the public for a number of years. The preliminary work which led up to the legislative act providing for the purchase of ground for a State Sanatorium and the general discussion of state sanatoria have resulted in diffusion of a great deal of useful knowledge and saner views in reference to the management of this affection.

Interest is indicated by the increasing number of public lectures which are given from time to time in various parts of the state. Recently Dr. Knopf, under the auspices of the District Nurses' Association, delivered a lecture on this subject in our city. Last month Dr. B. F. Lyle, who has charge of the

Cincinnati Tuberculosis Hospital, delivered a popular address, under the auspices of the Clark County Medical Society, before the Young Men's Christian Association of Springfield on the subject, "Tuberculosis, Its Prevention and Treatment." The medical profession of that city was largely represented. He gave the death rate from consumption at about sixteen per cent. and declared himself in favor of having cases of consumption reported to the health authorities. The annual death rate from consumption in Ohio is 6,000. He "believes that Ohio is just as healthful as Colorado and that consumption can be treated here as well as there."

In a paper read before the State Medical Association, Dr. Lyle discussed exhaustively the open-air treatment of consumptives in which he gave results of his experience and study of this disease. Interest in this subject is indicated also by the attention which is being given to it by teachers, ministers and others.

We trust that such men as Dr. Lyle, Dr. Knopf and Dr. Probst will continue their efforts in extending information in reference to this disease until we have in Ohio, not only one but several well-equipped state sanatoria for consumptives.

PHYSICAL DEVELOPMENT IN COUNTRY AND CITY.

Scientific comparisons between youth reared in the country and city youth confirm the popular impression that rural life furnishes better opportunities for physical development than the centers of population. This is shown in a recent report made by Dr. D. C. Huddleson, Director of the Gymnasium at the Ohio State University, who has conducted a series of examinations and tests of Freshman students at that institution. The country boy is found to be physically superior to the city youth. The conclusions are based upon the examination of 250 members of the first year class at the university. The average height of the country boy at the time he enters the university is 67 1-2 inches and his weight 139 1-2 pounds. The city youth is 1 1-2 inches taller and weighs 142 pounds, but the former is said to be of a more sturdy build. According to Dr. Huddleson's report six of every ten of the country boys are evenly developed, that is, corresponding measurements on the right and left sides will not vary more than 4-10 of an inch, while only two out of every ten city boys are found to be symmetrically developed. Most of the boys from the city have one hip high and one shoulder a little low, with the result of a slight spinal curvature. "The country boy is practically free from this deformity, and his muscle action is stronger, although somewhat slower than that of the city student." A physical examination at the university is compulsory for the young men and a chart of their physical development is on file in the Department of Physical Education. In a study of street railway employment, as reported in the Bulletin of the Bureau of Labor, Dr. Weyl says that the great majority of the street railway companies are in favor of men from the country, for the alleged reason, among many others, that they are in better physical condition, are "more rugged" and have "better habits" than men from the cities.

Seven out of every ten city Freshmen use tobacco in some form, while but thirty-three per cent. from the rural districts are addicted to the tobacco habit. Such an extensive use of tobacco among students should be a matter of concern to parents and instructors. The injurious effect of the use of tobacco, both upon physical and mental development of youth, is beyond question, to say nothing of objections to it from esthetic considerations. We believe that it is the duty of our teachers to discourage this habit. It would be interesting to know what per cent. of the boys in the other classes, that is, Sophomore, Junior and Senior years, use tobacco. We fear that its use becomes more general in the higher classes. It is a sad commentary upon college life that a habit which weakens the will and impairs the health should find so little check in these institutions.

THE APPEARANCE OF "RED MILK" IN COLUMBUS.

On account of the rarity of contamination of dairy milk with the bacillus prodigiosus, the following data furnished the Columbus Board of Health by Dairy Inspector Dr. Norton Dock, is of interest:

Dr. Dock reported that in the early part of October, 1904, a sample of milk was brought to the Dairy Inspector for examination. This milk was of a deep pink color. The "bacillus prodigiosus" was suspected but owing to the extreme rareness of this the question became doubtful. An agar plate was inoculated. This showed a bright red growth. To confirm the diagnosis, specimens were sent to the Ohio State University and to the Sewage Testing Station. The diagnosis being confirmed, a means of combating the disease was next taken up.

The stable was freed from all litter, etc., which was burned. Lime, gas lime and carbolic acid were applied all over the stables. Formaldehyde was burned. The infection was temporarily checked, but on November 21, 1904, a similar outbreak occurred. The same line of antiseptic treatment was carried out. On December 24, 1904, a third occurrence took place. The combined efforts of sanitarians failed to remedy the evil permanently, inasmuch as it was impossible to thoroughly fumigate the barns. At this time samples of fodder, hay, malt and malt sprouts were examined for the bacillus prodigiosus. In most instances these examinations resulted in the finding of the bacillus prodigiosus. At this stage the dairyman, Walter Binns by name, became earnest in his appeals to the Department of Health for relief, as his customers were leaving him in large numbers. On the 31st of March, 1905, an expert from the Ohio State University visited the dairy and stated that it is impossible to get rid of the infection without destroying the barn. After unsuccessful efforts covering several months to stamp out the infection by the observance of all ordinary aseptic precautions, the dairyman became discouraged and quit the dairy business.

Dr. Dock says that in looking up the literature no record is found of a similar outbreak in this country. German literature records only five or six outbreaks.

A STATE MEDICAL JOURNAL.

The House of Delegates of the S. M. A. has decided to discontinue the publication of the transactions of the society in book form and instead to publish a monthly journal. The journalization of the proceedings was referred to a committee consisting of Dr. Frank Winders, Secretary of the Association, Dr. T. W. Rankin and Dr. C. F. Clark, all of Columbus, with power to act. There seemed to be a general sentiment in favor of journalizing the proceedings. No expression was secured from the delegates or members as to whether a new journal should be started or whether a journal already established should be bought, or otherwise secured, as a state journal.

The committee has decided to start a new journal and has elected Dr. Frank Winders managing editor. We wish for the Journal abundant success.

We trust that permission will be granted the authors of papers to publish either abstracts or the original papers in other journals, if they so desire. State medical journals as a rule have but a limited circulation outside the state, and besides if publication elsewhere is denied weeks or even months may elapse before some of the papers will reach the profession.

PHYSICIAN VINDICATED.

The damage suit brought by Dr. E. B. Mauk against the board of health of Delphos has attracted considerable attention, especially in the northwestern part of the state, and is of interest to the general profession as it has been the means of securing decision in the Supreme Court on points in the libel laws of the state not heretofore submitted.

The board of health of Delphos published a resolution, the preamble of which, as shown in the trial, cast reflections upon Dr. Mauk. The preamble and resolutions, published in a local paper, were as follows::

"Board of Health—Resolutions adopted at a meeting this morning. "A meeting of the board of health was held at the mayor's office and the appended resolution adopted."

"An order to prevent and restrict infectious diseases. Whereas, the board of health of the village of Delphos, Allen and Van Wert counties, Ohio, after careful consideration has become satisfied that, in said village, a number of deaths have recently resulted from the carelessness and negligence of the physician attending the patients in child-birth soon after attending and handling other patients affected by blood poision and other infectious diseases; and that from the same cause others in said village have greatly suffered and barely escaped death.

"'Therefore, it is hereby ordered by the board of health of the village of Delphos, Allen and Van Wert counties, Ohio, that no physician and surgeon or midwife or other person who has heretofore or may hereafter practice medicine, surgery or midwifery, in any of its branches, shall within said village attend as physician, surgeon or midwife, or touch or handle any woman in child birth nor perform any act of surgery, or touch the mucous membrane of any person within thirty days after such physician and surgeon, midwife or other person practicing or attempting to practice medicine, surgery or midwifery, has touched or handled any person affected with blood poison, gangrene, erysipelas, or other infectious disease, except in continuing to treat his or her patients affected with the same, and no other infectious disease. This order shall take effect and be in force from and after its adoption and publication according to law. Adopted March 6, 1900. (Signed.) W. R. Cochran, Jr., *President,* N. E. Brundage, *Clerk.*"

Dr. Mauk sued the board of health for $15,000.00 damages.

Prior to commencing suit, Dr. Mauk endeavored to have the board of health retract, or make apology for publishing the preamble, by publishing such retraction or apology the same number of times and in the same papers as the original notice was published, but the board refused to thus exonerate him.

The case was tried in the Common Pleas Court where a decision was rendered that there was no "cause of action." The case went to the Circuit Court on error in the charge of the court. The Circuit Court sustained the lower court. The case was then appealed to the Supreme Court where the plaintiff was sustained. The Supreme Court held that "the plaintiff did not have a fair trial; the judgments of both courts were reversed and the cause remanded for further proceedings according to law. The court held that from the evidence in the case the plaintiff was entitled to compensatory damages against all of the defendants and exemplary damages against those manifesting, according to the evidence, express malice.

The Supreme Court states that there had been no testimony given tending to show that the plaintiff had treated such cases of blood poison nor that he communicated such disease to his patients. Among the errors of the lower courts pointed out was that of refusing to allow evidence offered by the plaintiff on the part of one member of the board (Dr. Eger) to show that, at the time the resolution was being considered by the board, he (Dr. Eger) said to the board that the preamble was false; that he (witness) was with Dr. Mauk in those cases and that the latter used proper care, and that if they passed the resolution with the preamble attached they would get into trouble. "This evidence was clearly competent and the ruling was certainly prejudicial error." The court held also that expert "testimony having been given on the part of the defendants by one physician and that of another in rebuttal having been excluded, the exclusion of the latter was error." "The preamble charges a degree of carelessness on the part of the physician referred to amounting almost to criminal negligence. To say the least, it was calculated to injure the physician in his profession by tending to prevent his obtaining employment, and thus to deprive him of the emoluments whch pertain to his calling. No argument can be needed to show that the act charged as done by the physician, if believed by the community to be true, works substantial harm. The preamble, therefore, was libelous *per se*. It was error, therefore, for the court to submit to the jury the question whether or not the preamble was libelous and whether or not it was privileged."

In commenting upon the charge of the Common Pleas Judge to the jury the Supreme Court said the instruction was faulty because the rules before given the jury, or some of the essential ones, were faulty as hereinbefore shown. The plaintiff was entitled by the court to the direct charge to the effect that if the plaintiff had, by a preponderance of evidence, sustained his claim that he was the physician intended by the preamble and that the preamble was published by defendants as charged he was entitled to recover.

In the second trial heard before the Common Pleas Court in June of this year the defendants pleaded justification for the publication. The trial occupied ten days and about one hundred witnesses were examined.

The evidence in the case throughout disclosed that there was no person who had septicemia as set up in the defendant's answer, and there was an entire lack of evidence on the part of the defendants to show that the physician was careless and negligent in any respect; on the contrary it showed that he was extremely careful and that the persons died of entirely different diseases from those claimed by the defendants. The evidence also showed that the board of health admitted that they had never made any investigation of the cases whatever and consequently knew nothing about thm except, as they alleged, from rumor.

The jury returned a verdict in favor of the plaintiff, awarding him damages in the sum of $1350.

The result certainly appeals to all who are famiiar with the case as just and right. It is a complete vindication for Dr. Mauk, and a forceful rebuke to the members of the board who were responsible for the false accusations. The amount of damages is immaterial, the disproval of the implied charges, is, of course, full vindication.

A motion for a new trial was filed by the defendants but the court held that there had been no error, therefore application for another trial was denied.

SCHOOL BOARD HEALTH RULES.

The Columbus Board of Education has recently reaffirmed its rules regarding vaccination. These rules provide, in general, that no pupil shall attend any public school until he shall have been successfully vaccinated by a registered physician at least once every five years, and shall furnish the teacher with a certificate of vaccination.

After prolonged consideration the Board also adopted a rule requiring certificates of health from all teachers employed in the public schools. While there may be difference of opinion as to the advisability of this rule, yet we believe careful consideration of all interests concerned make it evident that such rule is a wise sanitary regulation. Certainly no teacher suffering from the ordinary contagious diseases should be permitted to continue her work, and in like manner a teacher suffering from tuberculosis, not only for her own good, but for the safety of the children, should not be confined in a school room.

Such persons should secure outdoor employment and place themselves under treatment and the direction of a physician. By taking strict precautions to guard against the dissemination of germs from sputum or exhalations a consumptive may mingle with other people without exposing them to danger; but there are few teachers who would exercise the necessary precautions at all times, and in order for the precautions to be effectual they must be constant.

We believe the enforcement of this rule will materially lessen the danger from tuberculosis and also prolong the lives and make possible the restoration to health of many teachers who have contracted tuberculosis.

RESIGNATION OF DR. F. WINDERS.

Dr. F. Winders has tendered his resignation as Secretary of the State Board of Medical Registration and Examination to take effect January 1st, of next year. Ever since the organization of the Board Dr. Winders has been its Secretary. During that time he has rendered valuable service to the cause of medical education in the State. He has managed the affairs of the office in a manner to reflect credit upon himself and the Board. His unfailing courtesy, considerate judgment and efficiency have won for him the friendship of all who have been brought into contact with the office. His resignation is a distinct loss to the Board.

Dr. Winders has recently been elected Editor of the Ohio State Medical Journal which is to be edited by the Publication Committee of the State Association. His extensive acquaintance in the profession and familiarity with the peculiar needs of the professon as well as with the rules of the Board and the laws regulating the practice of medicine in the State admirably equip him for his new position.

Courtesy OHIO STATE JOURNAL.

ESTELL H. RORICK, M. D.

Dr. E. H. Rorick, formerly Superintendent of Athens State Hospital, was elected, May 1, Superintendent of the Ohio Institution for Feeble Minded Youth to fill the vacancy made by the death of Gustavus A. Doren.

He was born near Adrian, Michigan, September 1, 1842, and received his early education in the public schools and at Kalamazoo College. Later he attended the University of Michigan, graduating in medicine in 1869. He was graduated in medicine from Detroit Medical College in 1876 and also from the University of Alabama in 1883, pursuing post-graduate study at New York Polyclinic and the University of Edinburgh. He practiced medicine at Fayette, Ohio, until his election, under the administration of Governor Bushnell, to the superintendency of the Athens State Hospital, where his efficient administration evidently merited the promotion which came in his election, May 1st of this year, as Superintendent of the Ohio Institution for Feeble Minded Youth. He brings to his new position ripe experience, zeal and enthusiasm which are sure to further develop and improve the institution placed under his charge. His appointment is a fitting tribute of recognition to one who has devoted years to the study of our defective classes and given years to their care, and we predict that his administration will greatly advance the interests of this important state institution and thereby reflect credit upon the appointing power.

Medical News Notes.

Dr. J. E. Brown and wife are at Indian River.

Dr. and Mrs. J. E. Beery are on a trip down the St. Lawrence.

Dr. Frank Wagenhals and wife are on a trip to Atlantic City.

Dr. J. A. Reibel is pursuing post-graduate studies in New York.

Dr. T. C. Hoover and family are spending their vacation at Indian River.

Dr. E. J. Wilson has moved his office from 112 East Broad street to 106 East Broad street.

In the medical wards there were 496 patients cured, 122 improved, 49 unimproved, and 72 died.

Dr. J. F. Jones has changed the location of his office from 205 W. Goodale to 11 W. Goodale.

Dr. F. A. Heckler has removed his office from the Y. M. C. A. Building to 106 East Broad street.

Dr. John K. Eyler of Kittanning, Pennsylvania, was married to Mrs. Eva Plank of this city, May 31.

Dr. C. S. Means read a paper at the meeting of the Crawford County Medical Society, Thursday, June 27th.

Dr. Joseph Lipman was recently elected president of the Hebrew Educational and Benevolent Society of this city.

Dr. and Mrs. R. J. Sharp have returned from the lakes and northern Michigan, where they spent the past three weeks.

Dr. W. D. Deuschle has removed his office from the corner of Lexington avenue and Long street to 112 East Broad street.

In the surgical and gynecological wards there were 357 patients cured, 24 improved, 7 unimproved, 2 not treated and 8 died.

The semi-annual meeting of the Superintendents and Trustees of the State Hospitals was held June 15, 1905, at Massillon, Ohio.

Dr. R. R. Harris of Cardington, formerly of Columbus, was married to Miss Anna Thompson at the bride's home in this city, June 1.

Dr. Sherman Leach, wife and daughter are on an automobile tour to Westfield, New York, where they expect to spend a month.

Dr. W. D. Inglis of this city is on a trip to Europe and will spend several months in Berlin, where he will pursue professional studies.

Dr. Bishop McMillan, of this city, was elected President of the State Eclectic Medical Association at its annual meeting in this city May 4.

Dr. John M. Dunham resigned his position as Professor of Bacteriology and was elected Lecturer on Diseases of the Stomach at Starling Medical College.

DONATION TO THE PROTESTANT HOSPITAL.—The Protestant Hospital of this city recently received a gift of $5,000 from Mrs. Morris Sharp of Washington C. H.

Dr. W. J. Means, wife and daughter left June 23d for a trip through the West. He will also attend the meeting of the American Medical Association at Portland, July 10th.

FOR SALE.—At a bargain. I have a surgical chair that has only been used a couple of months that, on account of a change in location, I will sell very cheap. Address, XC., care of this office.

DR. W. H. PRITCHARD, ACTING SUPERINTENDENT.—The Trustees of the Gallipolis State Hospital for Epileptics have extended the term of the Acting Superintendent, Dr. W. H. Pritchard, to January 1, 1906.

Dr. Frank L. Stillman and Mrs. Louise Landon Converse were married at the home of the latter in this city, May 29th, and left the following day for Boston, whence they will sail June 10th to spend the summer abroad.

Dr. D. V. Burkett was injured July 7, by being caught between two street cars as he was boarding the car near his office. Though his injuries were severe he is improving and it is thought will make a complete recovery.

FOR SALE.—In Western Ohio, a practice averaging about $2,000 per year. Present incumbent must give up practice, account of ill health. Splendid opportunity for a young man. Apply by letter to A. B., this office.

The next annual meeting of the Mississippi Valley Medical Association will be held at Indianapolis, Indiana, October 10, 11 and 12 of this year.

Dr. Arthur R. Edwards, Chicago, will deliver the address on medicine, and Dr. W. D. Haggard, Nashville, that on surgery.

ST. ANTHONY'S HOSPITAL.—The thirteenth annual report of St. Anthony's hospital of this city, just issued, shows 1131 patients were treated in that hospital during the year ended December 31, 1904. Of the total number of patients, 739 were medical cases and 398 surgical and gynecological cases.

In the medical wards there were 496 patients cured, 122 improved, 49 unimproved and 72 died.

In the surgical and gynecological wards there were 357 patients cured, 24 improved, 7 unimproved, 2 not treated and 8 died.

There were 134 cases of typhoid fever treated, with 10 deaths. There were 54 cases of tuberculosis treated, of which 39 died and the others did not improve. In the medical department six cases of appendicitis were treated and all cured, while in the surgical department there were 43 cases cured, 2 improved and 2 died.

COLUMBUS MORTALITY REPORT FOR JUNE, 1905.—Tuberculosis, 21; cerebral congestion and hemorrhage, 9; organic diseases of the heart, 9; meningitis, 8; cancer, 7; pneumonia, 7; diarrhoea and enteritis, 7; accidental traumatisms ,7; diphtheria and croup, 6; senile debility, 6; convusions of children, 5; lack of care (infants), 5; typhoid fever, 4; other causes, 40; total, 141.

The State Hospital Training School held its annual commencement exercises May 23d, at which the following nurses were graduated: Misses Flora Beechman, Emma M. Essex, Elizabeth France, Jane B. Goodison, Nevada M. Jones, May Leist and Ada May Patterson. Dr. George Stockton, Superintendent of the Hospital, and Dr. D. N. Kinsman delievered addresses.

ANTI-TUBERCULOSIS LEAGUE.—The Anti-Tuberculosis League has been formed in Cleveland, with John H. Lowman, President, and W. H. Merriam, Secretary. The purposes of the association, as stated in their constitution, are: "(a) To effect the coöperation of all the organizations and individuals directly or indirectly interested in the study, causes, treatment and prevention of tuberculosis. (b) The study of tuberculosis in its social and economic relationships. (c) The dissemination of knowledge concerning tuberculosis. (d) The furtherance of preventive measures and scientific treatment of tuberculosis."

Recent Medical Books.

SAUNDERS' POCKET MEDICAL FORMULARY. By William M. Powell, M. D., author of "Essentials of Diseases of Children"; member of Philadelphia Pathological Society. Containing 1831 formulas from the best known authorities. With an Appendix containing Posological Table, Formulas and Doses for Hypodermis Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetrical Table, Diet-list, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Seventh Edition, Revised. In flexible Morocco, with side index, wallet, and flap. $1.75 net. Philadelphia and London: W. B. Saunders & Company, 1905.

In this new seventh edition there have been added over 460 new and valuable formulas, selected from the works and private practices of the best authorities. Many obsolete formulas have been eliminated, in their place newer and better ones have been inserted, embodying a large number of approved new remedies. In its new edition this Formulary is thoroughly representative of the most recent therapeutic methods, and its convenient size and mechanical get-up make it the most desirable work of its kind on the market.

LEA'S SERIES OF MEDICAL EPITOMES. Edited by Victor C. Pedersen, M. D.

HOLLIS' EPITOME OF MEDICAL DIAGNOSIS. A Manual for Students and Physicians. By Austin W. Hollis, M. D., Attending Physician to St. Luke's Hospital; to the New York Dispensary, etc. In one 12mo volume of 319 pages, with 13 illustrations. Cloth, $1.00 net. Lea Brothers & Company, Publishers, Philadelphia and New York, 1905.

Dr. Hollis' volume on Medical Diagnosis, just published, is the fifteenth of the series. The reader will find that it embodies a clear, accurate and compendious covering of the essentials of its subject.

ALLING AND GRIFFIN'S DISEASES OF THE EYE AND EAR. A Manual for Students and Physicians. By Arthur N. Alling, M. D., Clinical Professor of Ophthalmology in Yale University; Department of Medicine, New Haven, Connecticut, and Ovidus Arthur Griffin, B. S., M. D., late Demonstrator of Ophthalmology and Otology, University of Michigan, and Oculist and Aurist, University Hospital, Ann Arbor, Michigan. In one 12mo volume of 263 pages, with 83 illustrations. Cloth, $1.00 net. Lea Brothers & Company, Publishers, Philadelphia and New York, 1905.

We also take pleasure in announcing the publication of Alling and Griffin's Epitome of Diseases of Eye and Ear.

GYNECOLOGY, Medical and Surgical Outlines for Students and Practitioners, by Henry J. Garrigues, A. M., M. D., Gynecologist to St. Mark's Hospital in New York City, etc. With three hundred and forty-three illustrations. Publishers, J. B. Lippincott Company, Philadelphia, 1905.

This book presents the essentials of modern Gynecology. It is an outline of the whole system of Gynecology, calculated to be a guide for beginners. For students in medicine and general practitioners it will be found a very valuable book.

THE EYE, MIND ENERGY AND MATTER, by Chalmers Prentice, M. D., Chicago, Ill. Published by the Author, 1905.

Very little can be said for this book. It is unique in its semi-professional character and the conclusions of the author are scarcely substantiated by the observations of other investigators. He maintains that drunkenness is a nervous disease and that its cure can be brought about by the use of eye glasses; also that plants think and that vegetation is dominated by mind. The reader will have to come to his own conclusions after a perusal of the work.

A TEXT-BOOK OF MEDICAL CHEMISTRY AND TOXICOLOGY. By James W. Holland, M. D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia. Octavo volume of 600 pages, fully illustrated, including 8 plates in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $3.00 net.

Dr. Holland possesses the faculty of making even the most difficult and complicated chemical theories and formulæ easy and clear. Recognizing that to understand physiologic chemistry students must first be informed upon points not referred to in most medical text-books, the author has included in his work the latest views of equilibrium of equations, mass-action, cryoscopy, osmotic pressure, dissociation of salts into ions, the effects of ionization upon electric conductivity, and the relationship between purin bodies, uric acid, and urea. Chemical substances he has treated from the standpoint of the medical student and physician, giving much more space to Toxicology than is given in any other text-book on chemistry. The chapters on the clinical chemistry of milk, gastric contents, and the urine, and that on water supply and filtration are full of practical information. Dr. Holland's work will undoubtedly be gladly received by the profession, presenting as it does the mature experience of a practical teacher.

WELCH & SCHAMBERG ON ACUTE CONTAGIOUS DISEASES. A Treatise on Acute Contagious Diseases, by William M. Welch, M. D., Consulting Physician to the Municipal Hospital for Contagious and Infectious Diseases; Diagnostician to the Bureau of Health, etc., Philadelphia, and J. F. Schamberg, A. B., M. D., Professor of Dermatology and of Infectious Eruptive Diseases, Philadelphia Polyclinic; Consulting Physician to the Municipal Hospital for Contagious and Infectious Diseases, and Assistant Diagnostician to the Philadelphia Bureau of Health, etc. In one very handsome octavo volume of 781 pages, illustrated with 109 engravings and 61 full-page plates. Cloth, $5.00 net; leather, $6.00 net; half morocco, $6.50 net. Lea Brothers & Company, Publishers, Philadelphia and New York, 1905.

This work is based upon the personal study of the many patients who come daily under the charge of the authors in the Philadelphia Municipal Hospital. The authors claim a study of nearly ten thousand cases each of small-pox, scarlet fever and diphtheria, along with measles, chicken-pox, typhus fever, etc. The illustrations are exceptionally fine. It is a work which will be of value and interest on the shelves of every practicing physician.

LEA'S SERIES OF MEDICAL EPITOMES.

TULEY'S EPITOME OF PEDIATRICS. A Manual for Students and Practitioners. By Henry Enos Tuley, A. B., M. D., Professor of Obstetrics in the Medical Department of Kentucky University, Louisville, Ky. In one 12mo volume of 266 pages, with 33 engravings. Cloth, $1.00 net. Lea Brothers & Company, Publishers, Philadelphia and New York, 1903.

Professor Tuley's compact work is a most useful epitomization. He considers the whole subject of Pediatrics from the moment of birth to adolescence, including the anatomy, development, care and examination of infants, the therapeutics peculiar to that age, and the feeding of infants and older children, in full detail. He then covers the various diseases systematically and clearly with the necessary directions and prescriptions. This little work may readily be carried in the pocket and consulted at times when larger volumes are inaccessible. In this way the physician may refresh his knowledge and gain practical points when needed. For the benefit of the student, questions are appended at the ends of the chapters, so that he may test his own knowledge. The volume is a fitting representative of the excellent "Medical Epitome Series."

LEA'S SERIES OF MEDICAL EPITOMES. Edited by Victor C. Pedersen, M. D.

ARNEILL'S EPITOME OF CLINICAL DIAGNOSIS AND URANALYSIS. A Manual for Students and practitioners. By James R. Arneill, A. B., M. D., Professor of Medicine and Clinical Medicine in the University of Colorado; Physician to the County Hospital and to St. Joseph's Hospital, Denver. In one 12mo volume of 244 pages, with 79 engravings and a colored plate. Cloth, $1.00 net. Lea Brothers & Company, Publishers, Philadelphia and New York, 1905.

Lea's Series of Medical Epitomes will comprise twenty-two volumes, of which this is the seventeenth. It contains an enormous amount of up-to-date information on laboratory investigations and clinical diagnosis, skillfully condensed, simply and clearly stated. As might be expected, the sections on the Blood and Urine, are very full, but sufficient consideration is also given to the examination of Stomach Contents, Feces, Sputum, many Bacilli, Cerebro-Spinal Fluid, Milk, etc.

THE COLUMBUS MEDICAL JOURNAL.

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VERONAL, OR DIETHYLBARBITURIC ACID.

BY J. C. LARKIN, M. D., HILLSBORO, O.

Veronal is chemically diethylmalonylurea or diethylbarbituric acid. Malonylurea or barbituric acid has the composition $CH_2+2CO+2NH+CO$. By replacing both H atoms of the CH group by two ethyl groups, diethylmalonylurea, or veronal, is formed, which consequently has the formula $C(C_2H_5)_2+2CO+2NH+CO$. It is to the ring-form binding of the CO radicals and the simultaneous presence of the urea group and the ethyl groups that Fischer and Mering ascribe the powerful hypnotic action. It is a colorless and odorless body of beautiful crystalline structure and faintly bitter taste. Melting at 191 C., soluble in about 12 parts of boiling water and in 145 parts of water at 20 C., and forming readily soluble salts with alkalies; which latter is of importance in the absorption within the intestines.

I was led to employ this agency after meeting with failure in using almost all other hypnotics, in a case of neurasthenia sexualis. It proved so satisfactory, that I tried it in various cases where a pure hypnotic is indicated.

The first case in which veronal was employed by me, was one of long standing. Mr. J., with sexual neurasthenia, formerly grocery man 15 years, age 44 years. Family history negative. No history of serious illness. Five years ago began to fail in health, gave up business, traveled some in search of health. Spent one winter in Florida. Tried treatment at a sanatorium, and finally came home in despair. Spent from 12 to 18 hours in bed each day, but could not sleep. This patient was put on 10 gr. veronal in hot water or weak tea at bed time. From the first he slept 8 to 10 hours and got up refreshed. This dose was continued at regular intervals, and the sleep began to grow more natural. The patient insisted that this was the only natural sleep in 5 years. This drug was used continuously for over 6 months, *without any bad or disagreeable* results. It never impaired the digestive organs, never lowered the pulse, or affected respiration. The patient has steadily improved until he is doing outside work, and looking after his real estate, as I had advised out of door employment. He uses veronal only once or twice per week, when he is over tired, and does not fall asleep at once. He is having natural sleep. Says he can get along nicely without the sleep medicine, and has no desire for its use. Miss B., music teacher, age 30, had suffered with insomnia for 3 or 4 years. Rarely ever had over 5 hours of sleep, and was somewhat neurasthenic. I gave her 7½ gr. veronal in weak hot tea at bed time. From first she slept 10 hours, and felt much better: continued it for one week continuously and then only occasionally as required; used in all about 3 drachms. And now sleeps the natural length of time, and does not use it at all. Patient aged 55; banker; has suffered with insomnia for years. Had no other trouble. Was a hard worker. Gave 10 gr. veronal in warm water at bed time. It produced profound sleep. Takes it only as required, which now is two or three times per month. At first he complained that he felt a little drowsy next morning, and I advised him to take only ½ of 10 gr. powder, and satisfactory results were obtained. He continues to use as required. Mrs. L.; aged about 41; mother of two children, suffered with hypochondriacal melancholia for over one year. Same remedy used. In the acute mania of her case, it was not as satisfactory as a combination, hypodermatically of hyoscine hydrobromate 1-50 and morphine gr. 1-4. The sleep produced by veronal in this case was always quiet, however. Mr. W., aged 30, merchant; acute alcoholism. The usual dose of 10 gr. would produce sleep, quite refreshing under ordinary circumstances, but not during the acute delirium following the withdrawal of alcohol. This patient always felt refreshed, and his mind was always clearer, and there was no confusion of ideas, and no desire to continue its use, which is always desirable in dipsomaniacs.

In numerous other single instances, I have administered this hypnotic, in various ailments, and it has always been satisfactory in every way. It has no depressing action, and always produces good, refreshing sleep. It has no tendency to produce a drug habit. It is easy and pleasant of administration, and certain in its action.

Dr. Robt. Bartholow, in an article in N. Y. and Phil. Medical Journal, Sept. 19, 1903, advocates it in combination with trional. He claims that when administered in proportion of 10 gr. veronal with 5 gr. trional, it has all the advantages of the old combination of bromide, chloral and opium of Brunton, without any of their disagreeable objections.

In veronal, I believe we have the best hypnotic obtainable, as it is reliable in its physiologic action and without any disagreeable or objectionable effects. It is a decided advance in therapeutics, and entitled to first place as a soporific. While it has only been introduced in this country a short time, it has been extensively and successfully employed in Germany.

While the number of new remedial agents is legion, it is rare that we find one of even medium value, so when we find one of superior merit, I think we should welcome it.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.—The eighteenth annual meeting of the American Association of Obstetricians and Gynecologists will be held September 19, 20 and 21 at the Hotel Astor, Longacre Square, New York. Information will gladly be furnished to members or guests upon application to Drs. Robert T. Morris, 616 Madison avenue; Samuel W. Bandler, 229 West 97th street; and James N. West, 71 West 49th street, who constitute the local committee of arrangements.

IODINE IN SURGERY, WITH SPECIAL REFERENCE TO ITS USE AS AN ANTISEPTIC.*

By NICHOLAS SENN, M. D., CHICAGO.

Professor of Surgery in Rush Medical College; Surgeon-in-Chief St. Joseph's Hospital; Attending Surgeon Presbyterian Hospital.

The rise and fall in the repute and confidence of therapeutic agents on part of the profession are subjects of the deepest interest to every progressive sudent of medicine. Few drugs have stood the test of time and a large experience. Only too often the claims made for a remedy in the treatment of a certain disease are not substantiated when subjected to an impartial trial by a scrutinizing profession which has emancipated itself from the yoke of authority, and which, since the dawn of modern progressive scientific medicine and surgery, is earnestly engaged in search of facts based upon experimental research and reliable clinical observations. The *modus operandi* of many of the old and well-estabished remedies which have gained a well-merited reputation by their empirical employment, has been intelligently explained by the results of accurate scientific investigation and experimental research. In the light of such investigations some of the old remedies have found new applications, and among these iodine has recently attracted the attention of surgeons in a new rôle, namely, as an antiseptic. Iodine was discovered in 1812 by Courtois, a soda manufacturer of Paris. It plays an important part in nature's laboratory, as it is found widely diffused in the vegetable, mineral, and animal kingdoms. It exists in certain marine plants, particularly the fuci or seaweeds, and in various vegetables, potatoes, beans, peas, in some of the grains, and in many of the natural mineral waters, and in combination with native sodium nitrate, sodium iodide, and in some kinds of rock salt. In the animal kingdom it is found in the sea-sponge, the oyster, cod liver oil, and eggs. In the animal tissues it is widely distributed. Justus, making use of microchemic method, found iodine in the thyroid, thymus, lymphatic glands, kidneys, spleen ,testis, and suprarenal body. This substance appears to have a special predilection for the nuclei of cells, as it is found here most constantly and in largest abundance. The importance of iodine in the animal and vegetable tissues is evident; its exact office remains undetermined. Iodine is soluble in 5,000 parts of water, and in 10 parts of alcohol, at a temperature of 59° Fahrenheit; it is freely soluble in water wnen combined with potassium iodide, the color of the solution varying according to its strength from a light sherry to a dark brown, almost black, color. Dissolved in chloroform or carbon disulphid, the solution is violet in color. It is a very volatile substance, and evaporates even at common temperatures. The solution of iodine in water has no taste, and only a feeble odor of the drug. Iodine combines with most of the non-metallic and nearly all the metallic elements, forming a class of compounds called iodides. It was first employed as a medicine by Dr. Coinet, of Geneva, and soon acquired a reputation as an absorbent and counter-irritant in the treatment of many local affections, notably goitre. It has had a very extensive trial in the treatment of pleuritis, pericarditis, peritonitis, and chronic and acute inflammation of joints, bones and lymphatic glands. It has won a lasting fame in the treatment of syphilis, and is regarded as a specific in the hereditary form of the disease. The iodides have proved invaluable for the tertiary stage of this disease, as they often cause the rapid absorption of nodes, gummata, and other specific deposits. About half a century ago, injections of the tincture of iodine were frequently resorted to in the treatment of hydropic serous cavities, and in the treatment of hydrocele, introduced by Velpeau. It has retained some of its former prestige to the present day. Professor Brainard of Chicago, was a warm advocate of this treatment, and did not hesitate to extend its use to serous accumulations in the cranial cavity, spinal canal, joints, and pleural and abdominal cavities. The surgeons of that time recognized its stimulating action on serous surfaces, and relied on it in effecting obliteration by a process of plastic inflammation after complete or partial evacuation of the contents of the cavity. Brainard was enthusiastic in his expectations of the use of iodine in the treatment of spina bifida, which he introduced in 1848. The solution used consisted of one-fourth of a grain of iodine, three-fourths of a grain of potassium iodide, and one ounce of distilled water. Up to 1859 he operated on six cases, and collected five others from the practice of other surgeons, and it would seem that in all of them no dangerous effects were produced. Velpeau adopted this treatment in 1856, and Journeé in 1868 collected eighteen cases, of which number fourteen proved successful. English surgeons gave this treatment an extended trial, using for this purpose Morton's solution, which is composed of iodine, 1 part; potassium iodide, 3 parts; glycerine, 48 parts. This treatment was continued with varying results until aseptic surgery decided in favor of more reliable and safer operative intervention by radical operation.

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* **Republished from SURGERY, GYNECOLOGY AND OBSTETRICS, July, 1905.**

In the treatment of hydrocephalus iodine appears to have been disappearing. Von Ranke reports a case of chronic hydrocephalus in which he injected the ventricle (after tapping) with 30 c. cm. of a weak solution of iodin. The case promised well for a time, but proved fatal on the twenty-fourth day, death being caused by an intercurrent attack of intestinal catarrh. A few years ago a young man came into my clinic complaining of obscure cerebral symptoms without any distinct local evidences, but it was evident that abnormal intracranial pressure was present. I trephined on the right side, over the arm center. The dura was dense, and bulged into the opening. Cerebral pulsations were absent. I tapped the right ventricle with a small trocar, and removed half a teacupful of cerebro-spinal fluid, and then injected an ounce of iodine solution (sherry color). No untoward symptoms followed, and the patient left the hospital after two weeks, materially improved.

In the treatment of so-called scrofula and lupus, iodine internally and locally commanded the confidence of the profession for more than half a century before the bacillus of tuberculosis was discovered. Internally Lugol's solution (iodine, ʒ4; potassium, ℥1; distilled water, ℥8¾) or the syrup of iodide of iron were used, and locally tincture of iodine, Lugol's caustic solution (iodine, potassium iodide, āā, ʒi; water, ℥ii), and the ointments of iodine of potassium. A concentrated solution of iodine in glycerin was used with much success by Dr. Max Richter, in the treatment of ulcerating lupus and non-vascular goitre. The solution was applied with a camel's-hair brush, and evaporation of the iodine prevented by covering the surface with gutta percha, held in place by strips of adhesive plaster. As a local application, Mehu's iodized cotton gained at one time an enviable reputation. It was prepared in the following manner: Finely divided iodine, 5 to 10 parts, sprinkled between layers of loose cotton, 100 parts introduced into a tall vessel, and the latter placed horizontally on a water or sand bath. As soon as iodine vapors rise, and air is expelled, the bottle is tightly stopped. Continuing moderate heat, the iodine vapors penetrate the cotton and color it yellow. After two hours the cotton will have assumed the color of burnt coffee, and the preparation is finished. As an intra-articular injection in the treatment of joints, iodine has been used for a long time, and with decided benefit. The solution in common use was composed of 1 to 5 per cent iodine, 10 per cent potassium iodide, dissolved in distilled water. The strength of the solution was gradually increased from 1 to 5 per cent. As early as 1870 Orlow treated eight cases of inflammation of the knee joint with serous effusion, and two cases with sero-purulent effusion by tapping and injection of a solution of iodine. He allowed some of the solution to remain in the joint. Reaction was never severe. No further treatment was necessary, and all of the patients recovered. Durante recommends a solution of one to five per cent of iodine injected into and around tubercular joints. He limits the amount of fluid to 15 drops, and repeats the injection daily, using a hypodermic syringe for this purpose. Biagi claims to have cured six cases of tubercular peritonitis by injections of iodine. He makes use of a sixth to a half grain in aqueous solution. The injection is followed by pain, but is devoid of risk. Favorable results by this treatment are also reported by Campanini. In one of his cases forty-nine injections into the muscles of the abdominal wall proved successful.

As an antiphlogistic agent, iodine was first introduced by Mr. Davis, of England, and soon found a wide range of application in the treatment of erysipelas. S. D. Gross, the Nestor of American surgery, speaks of iodine in the treatment of this affection as follows: "Its reputation in erysipelas is fully established, and I have certainly myself found no article at all comparable to it in that affection as an endermic remedy. It is also of great service in boils, carbuncles, whitlow, corns, bunions and inflamed irritable ulcers of the extremities."

Lobit used iodine as an abortive in twenty-five cases of facial erysipelas, making a ten per cent solution of the drug in collodion and painting this over the inflamed surface. He attributes the curative effect to its bactericidal properties. Smolitsch has treated, with the most satisfactory results, more than one hundred cases of erysipelas, by applying the tincture of iodine to the affected part, and at least two inches beyond the inflamed zone twice in twenty-four hours, and covering the surface with cotton to prevent the too rapid evaporation of the iodine.

The experience of Trichomirow agrees with that of Smolitsch. He applies the tincture three to four times a day, and has seen the next day following its use, a fall in the temperature and limitation of the disease.

Rollin, Sereins, and others have employed parenchymatous injections of the pure tincture of iodine, with marked success in the treatment of anthrax.

Two new preparations of iodine have quite recently engaged the attention of the medical profession, namely trichloride of iodine and iodopine. The former introduced into practice by Langenbauch has been given quite an extensive trial in the treatment of tuberculosis of the genito-urinary organs. A solution of one-fourth of 1 per cent has been found beneficial as an injection in tubercular cystitis. In proportion of 1 :1,200 in culture media, it inhibits the growth of bacteria. Riedel found that a 0.3 per cent solution in water killed spores of bacilli in a very short time. Winternitz introduced iodopine, a solution of iodine in sesame oil, which has been used quite extensively by subcutaneous injection, and internally in the treatment of tertiary syphilitic affections. The dose is 20 c. c. of the 25 per cent solution by subcutaneous injection, and internally three to four teaspoonfuls of a 10 per cent solution. Finally, iodine and its salts have earned a well-merited reputation in the treatment of actinomycosis and blastomycosis by internal administration and local applications. These brief allusions to the therapeutic value of iodine, as determined by clinical experience in the past, suffice to demonstrate that it is a remedy of great value, and one which is certain to maintain its high position in the estimate of the medical profession, supported as it will be by substantial scientific proof. The time has arrived to assign to it its proper place as an antiseptic. Much of the therapeutic value of iodine and its salts depends on the readiness with which these remedies enter the tissues of the body by internal, rectal and endermic application, being thus promptly brought in contact with the tissues. The absorption of potassium iodide, when introduced into the rectum, is as rapid as when given by the stomach, especially when the solution is heated from 95° to 98.6° Fahrenheit. Administered by the mouth, iodine can be detected in the saliva in fifteen minutes, and in ten minutes after introduction through the rectum (Lemanski). The speedy and free absorption of iodine and its salts by the skin has been abundantly established by accurate experimentation. Linossier and Lannois found by their experiments, contrary to the general opinion, that the tincture applied to the skin is absorbed more rapidly if the surface is exposed to the air, than under an occlusion dressing. Skin damaged by the local use of iodine does not absorb as readily as intact healthy skin. From experiments made on rabbits by immersion in iodine solution, Gallard has become convinced that the healthy skin absorbs promptly and freely aqueous solutions of iodine. In examining the tissues of the animals experimented on, the iodine was found to accumulate in certain organs, especially the brain and the glands. He likewise proved that seven to twelve times more of the iodine is absorbed if the surface to which it is applied is covered by an impermeable texture than if it remains exposed to the air. In medicinal doses, slight intoxication is manifested by a complexus of symptoms, which has been designated as iodism, the main features of which consist of coryza, soreness of mucous membrane of mouth and throat, and ptyalism. Iodism in persons peculiarly susceptible to the toxic action, is just as liable to occur in consequence of small as large doses. Iodine is eliminated from the system chiefly by the kidneys, in the state of hydriodic acid or an iodide. Terrile found by his experiments on animals, that after subcutaneous injection, iodine is found in the urine for twenty days, while it is usually absent in the blood after two days. In man he ascertained by using an iodine solution in washing out an empyemic cavity, that no iodine could be detected in the exudate after the first twenty-four hours, while its presence in the urine was manifest for several days. Iodine is also freely eliminated from the system by the skin and the mucous membrane of the respiratory tract.

The prolonged use of the drug often gives rise to acne and other eruptions of the skin, and inflammation of the Schneiderian membrane and fauces, conditions undoubtedly due to the local action of the remedy on its way out of the system through the parts affected; as Adamkiewicz has found iodine in the secretion of the sebaceous glands and mucous lining of the nose in cases of iodism. If the elimination of iodine is interfered with by disease of the kidneys, acne is more prone to develop as a consequence of iodine medication.

The therapeutic value of iodine as a local remedy in surgery depends on two distinct properties of the drug: (1) It is a powerful tissue stimulant. (2) It is one of the most potent, least harmful, and most reliable of the known antiseptics. A combination of these two actions renders it an invaluable agent both in aseptic and antiseptic surgery.

IODINE AS A TISSUE STIMULANT.

In appropriate solution, iodine is not destructive to the tissues like most of our common antiseptics now in use. Its direct action on the living tissues is productive of an active tissue prolification, attended by a corresponding increase of vascularity of the tissues, influenced by its local action. Applied to infected tissues, it causes an active phagocytosis best calculated to aid its antiseptic property in combating the infection. This stimulating action is of special value in the surgical treatment of tubercular and other chronic inflammatory processes. As a tissue stimulant, iodine has been studied experimentally. Heinz made experiments on animals to determine the local action of iodine on the tissues, and found that it consists essentially in a typical adhesive inflammation, with fibrinous deposits on the inflamed surface, besides moderate, diffuse, inflammatory tissue irritation, attended constantly by diapedesis of the red blood corpuscles, but without necrosis and without affecting the integrity of the leucocytes. Schleich in his experiments on animals found that wound cavities packed with a sponge, saturated with a solution of potassium iodide, the packing contained more leucocytes than by the use of any other antiseptic. This observation induced him to recommend the internal use of this drug as a means of hastening the healing of wound cavities. Iodine has been used for a long time in producing plastic inflammation of serous surfaces for the purpose of obliterating hydropic serous cavities; consequently this substance was used in some of my experiments made in 1888, in studying the effects of mechanical and chemical irritation on the peritoneum. I will cite here only one of the experiments.

"Medium-sized dog. The needle of a hypodermic syringe was thoroughly disinfected, and a dram of tincture of iodine injected into the peritoneal cavity. Immediately after the injection the animal evinced intense pain, which, however, appeared to subside after a short time, and subsequently no unfavorable symptoms were observed. Three days after the injection the urine was examined and reacted to the iodine test. Animal killed nine days after the injection. Circumscribed plactic peritonitis over a space four inches square, corresponding to the point where the puncture was made. At this place the omentum was much thickened, very vascular, and firmly adherent to the parietal peritoneum and the adjoining intestinal loops."

IODINE AS AN ANTISEPTIC.

As an antiseptic, iodine has not received the attention it merits. Even in the most recent text-books on materia medica and therapeutics, the irritant action of iodine is put in the foreground, and its antiseptic properties are not sufficiently emphasized. We constantly meet with assertions like these: "Iodine is rarely employed for its antiseptic properties, as chlorine is cheaper. The preparations of iodine are in constant use as irritants, and counter-irritants."

Liebig first showed the antiseptic properties of iodine. Fibrin immersed in iodized water does not undergo putrefaction. The addition of a few drops of iodine to fetid pus causes the odor to disappear. Iodine, like bromin and chlorin, possesses the property to combine chemically readily with albuminous substances, coagulating them, thus becoming a potent antiseptic.

Mr. Thomas Bryant of Guy's Hospital, has for many years used a weak solution of iodine (sherry color) in the treatment of wounds and suppurating cavities. Von Popoff, in suppurating wounds, makes use of iodine water, of the strength 1:10,000 as an irrigation, and noticed a speedy improvement in their appearance and diminution in suppuration.

Meillère ascertained that a litre of spring water can be sterilized in a few minutes by four drops of tincture of iodine; even less will effect destruction of pathogenic microbes. Meyer found a saturated solution in fifty per cent alcohol more efficient as a bactericide than the pure tincture. The tincture is efficient in the disinfection of suppurating wounds. The tincture can also be used immediately after incision of phlegmonous abscesses and furuncles; also as a local application in the disinfection of suspicious surfaces, and to guard against infection in small accidental wounds. In 1880 Sternberg made experiments with iodine, and found that an aqueous solution with potassium iodide was fatal to the micrococcus pneumoniæ crouposæ in the proportion of 1:1,000, and to the staphylococcus of pus in 1:500; time of exposure ,two hours. Iodine water was found by Koch to destroy the vitality of anthrax spores in twenty-four hours, but a two per cent solution in alcohol failed to destroy the spores in forty-eight hours. Davaine, who made the first exact experiments on the germicidal power of different antiseptics, showed that seven milligrams of iodine in a litre of water was sufficient to prevent the growth of anthrax bacilli when he added one cubic centimeter of anthracic blood to the iodine solution. The same author also makes the statement that a solution of iodine, 1:10,000, neutralized completely a diluted weak solution of the virus of septicemia.

Cornil and Babes assign to iodine the seventh place as a bactericide. The antiseptic value of iodine is given by Miguel as 1:4,000. In the experiments of Schill and Fischer, twenty-four hours' contact with a solution of the strength of 1:500 failed to destroy the virulence of tubercular sputum, as tested by inoculation experiments. According to Warikoff, iodine in a solution of 1:5,600 kills the anthrax bacillus, while Koch asserts that a solution of 1:300 is necessary for this purpose. Baumgarten gives the time of the killing power of a two per cent aqueous solution on spores of bacilli as two hours. A one per cent solution of the trichloride of iodine destroys anthrax spores suspended in water almost instantly, and a 0.2 per cent solution within a few minutes. Langenbuch found that a solution of 1:1,000 kills spores in a short time, and that when added to nutrient gelatin in the proportion of 1:1,200 it inhibits the growth of bacteria to perfection. Behring, Tavel and Riedel have proved its valuable inhibitory effect on different pathogenic micro-organisms. It is used in the strength of 0.1 to 0.15 per cent for the disinfection of infected wounds. The above bacteriologic investigations go to prove that all authorities recognize the value of iodine as an antiseptic, but opinions differ widely in regard to the strength of the solution it is necessary to employ, to inhibit the growth of or destroy the different pathogenic bacteria and their spores. More definite light is needed to give iodine the prominence it deserves in the list of antiseptics. Anxious to ascertain the killing strength of iodine solutions on the most important pathologic microörganisms which interest the surgeon, and the time necessary to destroy them, I suggested to Dr. Guy Kinnaman, a recent graduate of Rush Medical College, to make the necessary experiments and investigations in the laboratory for surgical pathology of the college. He commenced his work at once in earnest, and spent nearly a year in completing it. His methods were accurate and his results reliable. The details of his work will soon appear in the medical press in the form of a report of the greatest practical value bearing on the bactericide action of iodine. He has kindly furnished me with the following table, showing:

STRENGTH OF AQUEOUS SOLUTIONS OF IODINE AND TIME NECESSARY TO DESTROY.

1. Actinomycosis (Bovis):
    (a) 1:500 for 15 minutes.
    (b) 1:300 for 10 minutes.
    (c) 1:200 for 1 minute.
2. Blastomycosis: 1:500 for 4 minutes.
3. Staphylococcus pyogenes aureus: 1:200 for 5 minutes.
4. Streptococcus pyogenes:
    (a) 1:1,000 for 30 minutes.
    (b) 1:500 for 2 minutes.
5. Bacillus of anthrax and spores: 1:100 for 10 minutes.
6. Bacillus of tuberculosis:
    (a) 1:200 for 60 minutes.
    (b) 1:100 for 7 minutes.
7. Bacillus prodigiosus: 1:100 for 10 minutes.

These experiments and their results so carefully made and so faithfully recorded, leave no further doubt that iodine is an invaluable antiseptic for general use in aseptic surgery, and possesses special virtues in the surgical treatment of affections caused by the bacteria subjected to experimentation. It will be noticed in glancing over the table that the most common and the most dangerous microbe with which the surgeon has to contend—the streptococcus pyogenes—is killed in two minutes when exposed to a solution of iodine of only one-fifth of one per cent. It is only reasonable to suppose that when brougt in contact with a one per cent solution it is destroyed almost instantly. The staphylococcus pyogenes is more resistant to the action of iodine, but a one-half of one per cent kills it in five minutes. It seems, then, that even a comparatively weak solution of iodine is the most deadly antiseptic for the ordinary pus-producing microbes. Taking into consideration at the same time that iodine, in solutions strong enough to act as the most reliable antiseptic, does not injure the tissues; on the contrary, it produces a salutary stimulating effect, and that the dangers from intoxication are much less than from the use of the two antisetpics now in most general use—carbolic acid and bichloride of mercury—its superiority as an antiseptic would appear to be established. There is every reason to believe that it will be given the prefernce over them as soon as the profession will give it the extended trial it deserves. I desire to call attention to the use of iodine as an antiseptic in the operating room, and as a remedial agent in the treatment of affections in which its use in my practice has yielded eminently satisfactory results.

AS AN AID IN HAND DISINFECTION.

Roux, of Lausanne, first made use of tincture of iodine as an aid in completing hand disinfection. After disinfecting the hands in the customary way, he dips the finger-tips into the tincture for the purpose of reaching and destroying the microbes lodged in the subungual spaces and folds of the finger-nails. Mikulicz adopted this practice in 1898, and has continued it ever since. After iodizing the finger-nails, he washes his hands once more in lysol solution before he puts on the cotton gloves. Culture experiments made in his clinic, showed that disinfection of the hands with bichloride and lysol solution yielded forty-seven negative results; alcohol disinfection, fifty-nine to seventy-eight per cent, and the additional dipping of finger-tips in tincture of iodine, eighty per cent, demonstrating conclusively the value of iodine thus employed as an aid in hand disinfection. In all aseptic operations in which I do not wear rubber gloves, I brush the subungual spaces and nail folds with tincture of iodine as the last step in the process of hand disinfection. By resorting to this additional aid of procuring asepsis for the hands, I have limited the wearing of gloves to abdominal operations, hernia, and operations on non-suppurating, non-tubercular affections of the joints. I am satisfied of the great value of finger-tip disinfection with tincture of iodine when gloves are not used, and I believe the time is near when a one per cent aqueous iodine solution will take the place of the antiseptics which are now generally relied upon in hand disinfection.

STERILIZATION OF CATGUT.

My interest in iodine as an antiseptic was awakened on reading the paper of M. Claudius on iodine catgut sterilization, published in the *Deutsche Zeitschrift fur Chirurgie* more than two years ago. I adopted his method at once, and later published my observations on the use of iodized catgut in the *Journal of the American Medical Association,* March 28, 1903. Claudius gives the following directions for iodization of catgut: The commercial raw catgut, without any preliminary preparation, is wound on a glass roll, two strings tied together to each roll. The sterilization is effected by immersion in a one per cent solution of iodine. The solution is made by dissolving iodide in one hundred parts of water. The iodine and potassium iodide are dissolved in a small quantity of water, to which the iodine, finely pulverized, is added, and the concentrated solution is then diluted to one per cent. The solution and catgut are kept in a bottle with a wide mouth, which is closed with an accurately fitting glass stopper. The date is written on the label of the bottle. After eight days the catgue is ready for use, and is preserved in the same bottle and the same solution. Before use the catgut is immersed on the glass roll in a three per cent solution of carbolic acid, or an indifferent sterile fluid, for the purpose of removing the iodine from the surface of the threads. The threads are cut in the solution as they are needed. The catgut not used in the operation is returned into the bottle, thus doing away with unnecessary waste of material. The catgut thus prepared is pitch black, soft, pliable, and almost as strong as silk. The knots are firm, and not liable to slip or unloosen. Catgut prepared by this method, according to its size, resists absorption for from twelve to sixteen days. Iodized catgut is not only absolutely sterile, but at the same time antiseptic. Claudius ascertained by experiment that if it is imbedded in a solid nutriment medium, infected with pyogenic microbes, the iodine contained in the catgut inhibited the growth of germs some distance from the threads. I have made use of iodized catgut exclusive to any other in the surgical clinic at Rush Medical College, Presbyterian Hospital, and St. Joseph's Hospital for more than two years with entire satisfaction. During this time hundreds of culture experiments have been made, and not a single instance with a positive result. The catgut remains in the aqueous iodine solution without loss of tensile strength for several weeks. If it is desirable to preserve it for a longer time, it is advisable to transfer it after eight days' immersion in the aqueous to an alcoholic solution of similar strength. Many complaints have reached me from different sources to the effect that the catgut thus prepared becomes fragile. This is not the fault of the method, but of the material used. Experience has satisfied me that the German raw catgut is the best material for iodinization. A long and extensive trial with iodoized catgut has convinced me of its reliability both in regard to its asepticity and tensile strength. Stitch abscesses are extremely rare in the use of iodized catgue ligatures and sutures, and when they do occur they are caused by contamination of the material after it is taken from the solution.

ERYSIPELAS AND SUPERFICIAL LYMPHANGITIS.

Knowing the power of iodine as an antiseptic, and the rapidity with which it is absorbed by the skin, we now can fully comprehend its curative effect in the treatment of erysipelas and superficial lymphangitis. In both of these infective processes the structures involved are so near the surface of the skin, that the iodine applied locally reaches the inflamed lymphatic channels in a short time, and by its direct toxic action on the streptococcus removes the microbic cause of the disease. I have seen the most virulent forms of streptococcus lymphangitis speedily arrested under the application of a compress, saturated with an aqueous solution of iodine in the strength of one-half of one to one per cent. This treatment is made more effective by preventing the evaporation of iodine by applying over the compress an impermeable cover of gutta percha, waxed or paraffin paper, oiled silk, rubber or makintosh. In persons with a very delicate skin, and in children, the strength of the solution should not exceed one-fourth of one per cent.

SUPPURATIVE SYNOVITIS

In several cases of suppurative synovitis of the knee joint I have witnessed the most striking power of iodine as an antiseptic. After multiple incisions and tubular drainage, the joint was irrigated freely with a one per cent solution of iodine, with the result of at once arresting suppuration, a result that I never obtained with any other antiseptic.

LARGE PHLEGMONOUS ABSCESSES.

Nearly the same satisfactory results were observed in the treatment of a number of diffuse phlegmonous abscesses. Incision, drainage, and free irrigation with a one per cent solution of iodine invariably resulted in arresting further extension of the disease, and prompt diminution in the amount of suppuration. In place of using a dry dressing, I have generally applied over the affected part a compress saturated with the same solution, retaining the iodine vapor by applying over it an impermeable cover. The compress is changed daily, and the irrigation repeated the same time until suppuration is completely under control.

TUBERCULOSIS OF JOINTS.

Ever since von Mosetig-Moorohof called attention to the therapeutic value of iodoform, and von Bruns advocated it so strongly in the treatment of tubercular joints, I have made use of it as an intra-articular injection in synovial tuberculosis with hydrops, and in the treatment of tubercular abscesses with signal success. I had come to regard it as almost a specific in tubercular hydrops of joints, and have seen repeatedly spondylitic tubercular abscess yield to from two to five tappings followed by iodoformization of the abscess cavity. I have always attributed the curative action of iodoform in these cases to the iodine liberated slowly from the iodoform. In rebellious cases to this treatment, I have found remnants of iodoform in the joints and abscess cavities days and weeks after the injection by subsequent tappings. For some time I have abolished the use of iodoform in such cases, and have substituted for it one per cent aqueous solution of the iodine and potassium iodide, and if anything the results have improved after making this change. By using the iodine solution the full strength of the iodine is brought at once to bear on the tubercular tissue lining the joints and abscess cavities, and thereby we secure the direct and full bactericide action of the iodine on the microbic cause of the disease. And it must not be forgotten that iodine is a much more powerful tissue stimulant than iodoform, and consequently has a more pronounced effect in initiating an active process of phagocytosis, a most valuable adjuvant to its antibacillary action. I have been in the habit of washing out the tubercular joints and abscesses freely, with a one per cent iodine solution after tapping and evacuation, and allowing from two to three drams of the solution to remain.

ENDERMIC USE OF IODINE COMBINED WITH CATAPHORESIS.

That the absorption of medicines applied to the skin in the form of solutions or ointments is increased by the imployment of cataphoresis is no longer a matter of doubt. In an experimental study of the galvanolytic-cataphoric influences on the eye, Schoeler and Albrand, of Wiesbaden, found that cataphoresis of potassium iodide through the eyeball produces changes in the interior of the eye which are different from those observed in galvano-punc, and are to be distinguished from those developed by simple galvanic current, as well by the value of the caustic action as by their greater intensity. Hunter McGuire made use of iodine solution applied by cataphoresis in the treatment of goitre. In a long-standing case he applied ten to fifteen drops on cotton in a cup-shaped electrode daily for three weeks. After three weeks' intermission the same treatment was continued for another three weeks when the swelling was reduced one-half its size, and all subjective symptoms had disappeared. In a recent case of goitre this treatment resulted in complete disappearance of the swelling. Out of a number of cases in my practice, I will here refer only to three which illustrate in a striking manner the value of cataphoresis in the local use of iodine.

CASE I. *Retro-sternal Goitre; Symptoms of Suffocation; Speedy Diminution in Size of Swelling, and Complete Relief from Subjective Symptoms.*

The patient was a German woman, sixty-three years of age, under my care at the St. Joseph's Hospital. For a number of weeks she had experienced great difficulty in breathing, with gradual loss of voice, so that at times she could not speak above a whisper. She could not lie down, and frequently had attacks of threatening suffocation. On examination it was found that she was free from disease, with the exception of a goitrous swelling about the size of a hen's egg behind the manubrium of the sternum. The swelling followed the movements of the trachea during the act of swallowing, and it was only during the ascent of the trachea that its size could be determined by palpation. Temperature and pulse normal; breathing was difficult at all times; lips cyanotic, with frequent spells of impending suffocation. The swelling was soft, and apparently quite vascular. It was deemed advisable to give the patient the benefit of tentative conservative treatment, which consisted of the local use of ice and a two per cent solution of potassium iodide applied daily by cataphoresis, with a ten milliampere current, continued for ten minutes. After a week of this treatment the ice was discontinued, and the potassium iodide solution increased in strength to ten per cent. The first change in the patient that was noticed was a gradually increasing relief in breathing, cessation of the paroxysmal attacks of dyspnea, and gradual diminution in the size of the goitre. At the end of five weeks the swelling had entirely disappeared, and breathing was normal.

CASE 2. *Extensive Actinomycosis of Submaxillary and Parotid Regions and Pharynx on Corresponding Side. Internal and Local Use of Iodine Powerless in Arresting Further Extension of the Disease; Prompt Improvement, and Ultimately Complete Recovery under Local Employment of Potassium Iodide by Cataphoresis.*

The patient was an Italian, thirty-five years old, who entered my service in the Presbyterian Hospital, January 31, 1899. He was an umbrella-mender by trade, and lived in the Italian quarter of the Ghetto. The disease had existed for several months, and involved the left side of the neck. The submaxillary and parotid regions were the seat of a hard swelling, continuous with the pharynx of the same side, the induration extending down to the clavicle, with a number of fistulous openings on the external surface, which gave issue to a profuse sero-purulent discharge in which minute gray granules could be detected with the naked eye. Microscopic examination of these bodies revealed the characteristic fungus of actinomycosis. The disease was so extensive, and involved so many important structures that a radical operation was entirely out of the question. For several months he was given gradually increasing doses of potassium iodide until iodism and a copious acne eruption showed that he was thoroughly under the influence of the drug, but without any apparent effect on the progress of the disease. We then commenced to administer a ten per cent solution of potassium iodide by cataphoresis in daily seances of from ten to fifteen minutes. Within a very few days a decided improvement was noticed, which continued under the same treatment without interruption until the patient left the hospital nearly a year after his admission in perfect health, the swelling having entirely disappeared and all fistulous tracts healed. He remained in good health for a year, when he was attacked with acute pulmonary tuberculosis, which proved fatal in a few months. He probably contracted the pulmonary disease from his wife, who died of tuberculosis shortly before he was taken in with actinomycosis.

CASE 3. *Blastomycosis of Skin Uninfluenced by Internal Use of Potassium Iodide; Slow but Steady Improvement and Finally Complete Recovery under Iodine Cataphoresis Treatment.*

The patient was a Hungarian, thirty-five years of age, and butcher by occupation. He was admitted to my service at the Presbyterian Hospital, October 5, 1903. His family history is good, and he is the father of six healthy children. General health, little, if any, impaired. In December, 1902, a small red papule made its appearance over the inner middle aspect of the left thigh, which gradually increased in size in the form of a papillomatous ulcerating surface, four by six inches. On admission the skin affection was about the size of the palm of the hand, somewhat ovoid in outline. The border of the ulcerated surface is well defined and indurated; the ulcerated surface itself dotted with shallow papillomatous projections interspersed between small ulcers and minute abscesses. These pinhead abscesses, when opened, exude a white, creamy, viscid fluid. Under the microscope the characteristic fungi of blastomycetes are found in this fluid. A section taken from the border of the legion shows the rete of the skin hyperplastic, dipping down and forming projections between the minute abscesses. The miliary abscesses are surrounded by a layer of squamous epithelium. The abscess contents consisted largely of blastomycetes, leucocytes, nuclear fragments, red blood corpuscles, and one or more giant cells. The treatment at first consisted of the internal administration of potassium iodide four times a day, the dose gradually being increased to fifty grains and the local use of antiseptics. As the skin affection did not show any signs of improvement, vigorous currettage and cauterization with pure carbolic acid, followed by alcohol, were resorted to without any apparent benefit. The internal use of the potassium iodide was then suspended, and the ulcerated surface covered with a compress, saturated with a one per cent solution of iodine and potassium iodide, aided by cataphoresis, in daily sittings of from ten to fifteen minutes. This treatment was interrupted several times by the patient leaving the hospital for a few days, but in the course of two months resulted in complete and permanent healing of the blastomycetic ulcer.

CONCLUSIONS.

1. Iodide is the safest and most potent of all known antiseptics.
2. Iodine in proper dilution to serve its purposes as an antiseptic does not damage the tissues; on the contrary, it acts the part of a useful tissue stimulant, producing an active phagocytosis, a process so desirable in the treatment of acute and chronic inflammatory affections.
3. In the treatment of simple hyperplastic goitre, actinomycosis, and blastomycosis, the local use of iodine is made more effective by cataphoresis.

STATE EXAMINATIONS.—One hundred and ninety-two candidates took the examination before the State Board of Medical Registration and Examination held in Cleveland, Cincinnati and Columbus, June 13, 14 and 15. Of these one hundred and sixty-five were graduates of the Regular, fourteen of the Homeopathic and twelve of the Eclectic school. Of the one hundred and ninety-two candidates only fourteen graduated from medical colleges outside the state.

INFLAMMATION.

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I. NAME—DEFINITION.

The term inflammation, originally applied to a single phenomenon or a tangible group of phenomena, has come to include such a great variety of pathologic changes that no definition adequately expresses the essential nature of this important process. The expansion of the concept of inflammation has led to a great deal of confusion. The symptom complex is usually well enough marked to establish a diagnosis and furnish guidance for treatment; but there is much confusion in regard to our theories of causation and the exact nature of the various inflammatory processes. A few distinguished surgeons teach that it is always of microbic origin, that healing by first intention is not inflammatory, but simply regeneration of tissue, while the majority of pathologists hold that it may be caused by various injurious influences besides infection. The pathologic findings are often necessary to determine whether or not certain changes have been the result of inflammatory action. The confusion in reference to this subject results from the necessity of including so many processes under the head of one general term, and in part from lack of accurate information in regard to many phases of the subject.

Without attempting a critical or exhaustive discussion we shall in a series of brief articles, beginning with this one, study the subject of inflammation from the following points of view: I. Name—Definition. II. Implied Theories and Etiology. III. Symptom Complex and Histologic Alterations. IV. Characterizing Factors—Mode of Arrest—Treatment.

The term inflammation, like many other words, was "aplied first to one object and then, by a series of transitions, to another, and then another, until finally it embraced things having little in common with those to which it was originally applied. As it is still retained by them, however, it happens that the name comes to designate in the end a confusion of objects which have nothing in common and indicates only a vague and general similarity. When it has reached this stage, it has become useless as a medium of thought and of communicating thought; its utility can be restored only when it divests itself of part of its diversity and is limited to objects which have certain attributes in common." This generalization indicates what has taken place in reference to the word inflammation. In regard to the clinical significance of the word there is practical agreement, confusion or difference of opinion being most evident in respect to the theory of inflammation and the nature of its numerous processes.

It is interesting to note that the phenomenon to which the term was originally applied is central in the modern conception of inflammation. The term is derived from the Greek word *phlegmona*, and the Latin, *flamma*, meaning to set on fire, and was given to the process evidently because of its tangible characteristics of heat, pain and redness. Subsequent analysis of the anatomical process connected with this external symptom group has shown that the vascular apparatus is the main point around which all the phenomena can best be grouped.

The synonymous term in German is *entzundung*—to kindle; in Arabic, *iltihab*—a blazing up; in Sanscrit, *dala*—a burning; in Hebrew, *kadakhab*—kindling or burning. Celsus enumerated four signs of inflammation, rubor et tumor, calore et dolore. To this tangible sympton complex we add functio læsa. "Inflammation," said Virchow only a few years ago, "as it can be at present defined, is no uniform process having constant characteristics."

Definitions of inflammation are not however without interest. They represent efforts at fixing the boundary lines of fact and theory in reference to this important subject. The following are from representative pathologists and authors:

Schmaus defines inflammation "as a condition of reaction exalted above the physiologic normal, pathologically altered and called forth by an external irritant." Councilman says that "under the term inflammation may be understood the changes which take place in a tissue on the receipt of an injury, including, not only those immediately produced by the injurious agent acting directly on the tissues, but also the more remote changes." The same author says that such a definition strictly carried out would include the special pathology of organs. Even malformations would not be excluded because most of these are due to injurious conditions or agents acting on the embryo and influencing or preventing development; and even tumors may be referred in part to the action of injurious agents on the tissues. It might also be noted that this definition, like many others, covers physiologic reaction to injury which should not properly be regarded as inflammatory, such as hyperemia following application of warmth or a moderate amount of heat. This might be applied to the extent of being injurious without establishing an inflammatory action; though this would, of course, depend upon our definition of injury. If by injury we include stimulation to the extent of producing pathologic conditions then qualification of the term is not needed. Sanderson defines it as "the succession of changes which occur in a living tissue when it is injured, provided that the injury is not of such a degree as at once to destroy its structure and vitality." This definition like the preceding one is broad enough to cover both traumatic and bacterial injury, however the proviso adds nothing to the meaning since if the injury is of such a degree as to destroy immediately "structure and vitality" the tissue would not be "a living tissue," as assumed in the first part of the definition, and furthermore as pointed out by Adami, this definition is too broad since it includes such non-inflammatory changes as hemorrhage occurring in the liver after a traumatism, and the subsequent changes in extravasated corpuscles.

Adami: "The series of changes constituting the local manifestation of the attempt at repair of actual or referred injury to a part. Or briefly, the local attempt at repair of actual or referred injury." This definition implies that aseptic healing is an inflammatory process, which is denied by Senn, Nancrede and others. Curtis: "Inflammation may be defined as the reaction of the tissues against injurious influences." Dorland: "A morbid condition characterized by pain, heat, redness and swelling and histologically by hyperemia and stasis changes in the blood and walls of the small vessels and by various exudations." Vaughan: "It is always reparative and regenerative and when it is attended by destructive action it is for the purpose of getting rid of something hurtful in order that repair may take place." Walsham: "It is a process combining degeneration and regeneration; on the one hand a degeneration of the cells and tissues with a pathologic exudation from the blood-vessels; and on the other, a regeneration of cells and tissues, with an absorption of the exudation." Warren: "Inflammation may be divided into two principal varieties, simple and infective. To the former belong those produced by trauma or injury, chemical action, ivy poisoning and escharautics. The infective inflammations are those produced by bacteria or the chemical substances evolved by them." Sutton holds that inflammation "is the method by which an organism attempts to render inert noxious elements introduced from without or arising from within it." Park's definition is broad enough to include poisonous irritants other than toxins. Rose and Carless say that Sanderson's definition is sufficiently correct if one amplifies the term injury to include bacterial invasion and excludes the final process of repair. Stengel: "By inflammation are designated the vascular exudative degenerative and regenerative changes which occur in the living tissues as result of irritation by chemical, mechanical and thermal agents." Or, to add another to the list, inflammation might be described as an ultraphysiologic reaction of tissue to injury. This definition excludes regeneration or "repair," which is here assumed to be a non-pathologic change, while it includes all injuries, whether infective, or thermal, producing a reaction more intense than the physiologic.

There is an evident attempt on the part of some of the authors quoted to separate the two varieties of inflammation as expressed in Warren's definition, the "simple and infective"; the infective sometimes being referred to as true inflammation.

The following authors hold that the term inflammation should only be applied to pathologic processes induced by bacterial irritants, that is, by infection. Senn defines inflammation "as the succession of changes which occur in a living tissue from the action of pathogenic microbes or their toxins." He says true inflammation is always caused by the presence of one or more kinds of pathogenic microbes. He draws a distinct line between the series of tissue changes which attend regenerative processes, uncomplicated by the action of pathologic bacteria, and true inflammation. He is careful to indicate that inflammation in the most comprehensive meaning of the term should embrace only pathologic conditions caused by the action of pathogenic microbes or their toxins upon the histologic elements of the blood and fixed tissue-cells. Nancrede: "Inflammation may be defined to be the series of results caused by microbic interference with the normal processes of repair in injured living tissues; the end results being the removal or neutralization of the microbic cause." He further says that there is no longer room for such terms as "aseptic" and "infective," but only for "repair" and inflammation" because the latter is always due to the action of germs or their products. "What is seen during normal repair," he says, "should not be termed inflammation, for while at certain stages presenting clinical and histologic phenomena similar to those seen in inflammation they are not identical processes due to the same cause." In the two processes some of the conditions are brought about by analogous and others by different causes, and because the conditions are the same the blunder of assigning them one causation has led to much confusion. Dr. Nancrede assumes that microbes are the real cause of inflammation and seeks to make his teaching consistent with this theory.

While it may, to a certain extent, be true that in attempting to discover a definition of inflammation, we are chasing a phantom, we believe that a study of these descriptions and the many others that might be cited, will repay one for the time expended in doing so. It will be seen from the above definitions that the chief differences in the views expressed relate to healing by first intention, the majority of those quoted above holding to the old view that all injuries heal by inflammation, whereas, Senn and Nancrede hold that this form of union is accomplished by a regenerative process in the absence of inflammatory action. Most of the works on pathology sustain the former theory, but from a clinical standpoint, and it is from this view that these surgeons approach the subject, and in the light of surgical bacteriology, their position seems rational. For all practical purposes in aseptic healing we have no inflammation, and it is the chief concern of the surgeon to prevent it, and where it exists to combat it, recognizing, of course, that where we have inflammation many of the pathologic changes which take place are salutary. They constitute nature's method of warding off injurious agencies and thus protecting the organism.

From the view point of clinical surgery at least, it would seem that we would be taking a step forward in accepting the premise of the newer definitions that aseptic healing is not an inflammatory process, while the preponderance of authority plainly supports the theory that mild forms of inflammation may be caused by other agencies than microorganisms.

The next International Medical Congress will be held in Lisbon, April 10 to 26, 1906. It is expected that it will be one of unusual importance, for a meeting which will be held in what has always been considered as an out of the way country. Already the titles of papers from some of the most distinguished men of the medical profession have been received. A most interesting program has been arranged by the Executive Committee for the following sections on Descriptive and Comparative Anatomy, Physiology, General Pathology, Bacteriology and Pathological Anatomy, Therapeutics and Pharmacology, Medicine, Pediatrics, Neurology, Psychiatry and Criminal Anthropology, Surgery, Medicine and Surgery of the Urinary Organs, Ophthalmology, Laryngology, Rhinology, Otology and Stomatology, Obstetrics and Gynecology, Hygiene and Epidomiology, Military Medicine, Legal Medicine and Section on Colonial and Naval Medicine.

CARCINOMA IN THIRD GENERATION.

BY W. E. ALLAMAN, M. D., DAYTON, O.

Miss K.; age 29; German-American: seamstress; mother living, healthy: brothers and sisters in good health. Father died of carcinoma of stomach at age 76; I had the privilege of visiting him professionally four days before his death and found a typical case of gastric carcinoma of more than a year's duration; tumor in pyloric region well marked by inspection and palpation. Father's mother died of carcinoma of uterus. Mother's father died of carcinoma of stomach. Patient's health until two years ago good, since then symptoms of gastric carcinoma have gradually developed; beginning with dyspeptic symptoms, gradually growing worse until at present liquids even in small quantities disagree with her, producing pain and nausea; anorexia and constipation persistent. Vomiting has not been marked, there being but two such attacks during past few months, no hematemesis, there have been, however, tarry stools. Emaciation marked—50 to 55 pounds have been lost and strength has gone in proportion; scarcely able to be out of bed, practically confined thus for four weeks. Pain has increased in frequency and severity until now more or less marked, sharp and lancinating in character; she complains most, however, of soreness and weakness of stomach, tenderness most marked in pit of stomach though quite tender over pyloric region. Tumor not well marked, though there is a thickening in pyloric region which can be elicited by palpitation, tender and if pressed upon too firmly produces faintness. There is also a thickening if not a tumor in left lumbar region on level with crest of illium, tender upon palpation not involving kidney, not changed by evacuation of bowels. No intraclavicular enlargement or nodules about umbilicus; right inguinal glands somewhat enlarged. Cachectic appearance, no jaundice. Urine small in quantity—containing albumin and tube casts. Boas test-meal given, stomach washed and contents examined, finding absence of HCl—lactic acid present. Blood not examined. The diagnosis was confirmed by a surgeon in consultation.

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AUGUST, 1905.

Editorial.

MEDICAL SERVICE IN ARMY.

The success Japan has had in the treatment of disease among her soldiers is unparalleled in the history of warfare. Never before were such brilliant results obtained in the treatment of the sick and wounded. This is especially significant when we remember that in the Spanish-American war the mortality from sickness compared with the mortality from wounds was something like ten to one. Ten died of disease where one died from wounds.

Typhoid fever, a preventable disease, was responsible for a very large percentage of deaths in this war.

It is stated that the Japanese prepared for the war with Russia largely by perfecting the medical department of their army. They remembered that in their war with China at one time fifty per cent of their army were dying of beri-beri. It was supposed that Russia could easily put in the field an army twice as large as that of the Japanese. The Japanese figured that if fifty per cent of the enemy's army were sick and there was no sickness in their army the contest would be in their favor. So these things and other things of a like nature have excited more interest than usual in the medical department of our own army and some of this interest has manifested in the medical department of the National Guard. The medical Department of the Ohio National Guard is composed of four companies of instruction; one at Zanesville, one at Cincinnati, one at Toledo and one at Columbus. These companies are commanded by physicians who have passed an examination usually considered quite rigid. They have the rank of surgeon and lieutenant, or surgeon and captain, or surgeon and Major, as the case may be. These companies consist each of about fifty men usually recruited from medical schools and colleges or from a class of young men whose interests lie in the things pertaining to the medical and surgical. The personnel of the hospital corps in the Regular Army and in the National Guard is considerably higher both in character and intelligence than that of the companies of the other arms of the service.

Each regiment, troop and battery has its surgeon or surgeons, and the entire medical department is commanded by a surgeon with the rank of Lieutenant Colonel. These companies of instruction each have several First-Class Sergeants or stewards who are registered pharmacists or who have passed an examination of such a character as that set for registered pharmacists. These sergeants have to do with dispensing medicines on prescription of the surgeon, with care of property, with the paper work, i. e. reports, etc., with instructing the men in first aid to the wounded, in foot movements, in litter drill, nursing, cooking for the sick, etc. They are assisted in this way by sergeants and privates.

The Columbus Company, designated "Company of Instruction No. 2, Medical Department, O. N. G.," has one commissioned officer who is in command, three First-Class Sergeants who are pharmacists with years of experience including service in the Spanish-American War. The company is composed largely of high school students, medical students and university students.

The Adjutant General of Ohio, believing that hospital corps men are utility men and as such need instruction in things pertaining to their work as much as do the soldiers with the rifle on the range, ordered this company into a camp of instruction at Newark. Ohio, from July 15 to 23. Forty men reported for duty; a hospital camp was laid out according to plans recommended by the medical department of the United States Army; a regular routine was followed, lectures, litter drill, dispensing, clinics on patients brought from the Fourth Infantry, which was in camp not far away, varied the program. Especial emphasis was laid on measures tending to prevent sickness; the disposal of garbage: the care of the sinks; the disposal of fecal matter in such a manner as to prevent flies from carrying infection.

During the Spanish-American War it was estimated that the fly in military camps was by far the most potent agency in spreading typhoid, doing more damage in this way many times over than the bullets of the Spanish. Col. E. T. Miller, Major Guerin, Major James McMurray and Chaplain Hewitt aided the commanding officer of the company in this instruction.

The drill and instruction of this company of the medical department is carried on each Wednesday night of the year at the Ohio Medical University. It is apparent that men thus trained, both by experience and instruction, would be of inestimable value should there be another war, since our citizen soldiery when assembled in large numbers in camps, as in 1898, through ignorance are likely to disregard the most vital principles of sanitation and self care. H. H. S.

OPEN TREATMENT OF BURNS.

Dr. Haldor Sneve in the "American Journal" of July 1, under the caption "The Treatment of Burns and Skin-Grafting," advocates the "open" method of treatment in a forceful manner. His arguments are emphasized by several remarkable case histories, and by statistics of some 75 cases. The several causes of death in extensive burns are (1) Shock, (2) Toxemia, due to the absorption of poisons from wound surface. (3) Retained poisons due to the loss of excretory function of the injured skin. (4) Exhaustion. The treatment is directed against the causes mentioned. In shock he favors the method advocated by Crile, Sonnenburg and Kinnaman, namely: heat to the extremeties, especially to the nape of the neck, the hot bath, and the maintenance of high temperature of the room. In the severer cases adrenalin and saline solutions by hypodermoclysis or intravenous infusion. The use of morphine, strychnine, whiskey, digitalis or atropine is tabooed. In discussing toxemia he strikes a blow at the occlusive dressing, when he argues that absorption of the poisons elaborated in the wound are promoted under the most favorable conditions since such dressings prevent evaporation of the perspiration and exudates in which are held in solution the poisons and are kept in close contact to the wound surface for ready absorption. The raw surface should be kept scrupulously clean and dry and evaporation encouraged. Blebs cut away and surface cleansed with normal salt solution and dried. Nature may be assisted in forming her defense of crusts against possible infection by the use of a dusting powder, stearate of zinc in Dr. Sneve's opinion being the most useful. Loss of Skin Function is met by stimulating the healthy skin which is best accomplished by keeping the room temperature as near as possibe to that of the body. Give cold sponge baths followed by friction rubs. Free perspiration is to be promoted. The excretory function of the skin should be supplemented by that of the kidneys and bowels, both of which may be flushed well. Exhaustion is due to the long continued struggle for recovery and is best prevented by hastening the healing process by use of the skin graft.

In favor of the open treatment of burns, his histories point to comparatively small amount of pain. This he controls after reaction is established, by the careful and judicious use of morphine. Much stress is laid upon the smoothness and flexibility of the scars in his cases, which he describes as "skin-like" even in third degree burns. This is accounted for as probably due to the absence of dressings which upon removal each day tear the tops of the granulations that have grown into the meshes, thus making uneven scar ridges. The granulations exposed to the air are described as being small, firm, even and healtheir than those under the "moist chamber" dressings. Dr. Sneve's observations incline him to the opinion that the time required for the healing of such wounds under this line of treatment is reduced two-thirds. He makes a plea for the gentle treatment of granulations, cleansing them with the kindly saline solution, rather than the severe strong antiseptics which are escharotic to the delicate tissue. His summary is as follows:

"First, treat the shock as indicated above. Second, control the pain as necessary and keep everything from contact with the burned areas. Third, keep the patient surgically clean. Ordinary surgical principles govern here as elsewhere. Fourth, give frequent cold sponge baths to the sound skin with friction, and keep room temperature high. Fifth, cut away all blisters, cleanse with normal salt solution, dry thoroughly, and dust all second degree burns with stearate of zinc, carefully wiping away serous exudate until dry, brown adherent crusts are formed. Sixth, leave third degree burns exposed without powder and keep surface clean until granulations are ready for skin grafting. Seventh, to maintain and preserve function body and limbs should be exercised as much as possible; the eschars of burns of the fourth degree should be removed when nature so indicates and amputation should be performed when needed." This method of treatment is certainly rational and one that should be adopted for thorough trial at least. It seems, however, that the success of the treatment would be influenced largely by the environment of the patient and unless the care of the case devolves upon a trained assistant the time worn protectorate dressing had better be applied. M.

THE PORTLAND MEETING.

The Portland meeting has been pronounced a most successful and profitable one. The accommodations were excellent, the season delightful, the papers of a high order and the attendance large. Many physicians availed themselves of the opportunity of attending the Association meeting and also of taking an extended trip to the Pacific coast.

The following officers were elected for the ensuing year: President, William J. Mayo, Rochester, Minnesota; First Vice-President, Walter Wyman, Surgeon General of the Marine Hospital Service, Washington, D. C.; Second Vice-President, K. A. J. Mackenzie, Portland, Oregon; Third Vice-President, Eugene S. Talbot, Chicago; Fourth Vice-President, E. Denegre Martin, New Orleans; General Secretary, George H. Simmons, Chicago (re-elected); Board of Trustees, E. E. Montgomery, Philadelphia, Pennsylvania; A. L. Wright, Carrol, Iowa, and H. L. E. Johnson, Washington, D. C.; Oration on Medicine, F. B. Shattuck, Boston; Oration on Surgery, Joseph D. Bryant, New York; Oration on State Medicine, W. H. Sanders, Montgomery, Alabama. The next meeting of the Association will be held in Boston, 1906. The council on Medical Education consists of W. T. Councilman, Boston; Charles H. Frazier, Philadelphia; J. A. Witherspoon, Nashville; Victor C. Vaughn, Ann Arbor; A. B. Beven, Chicago, Chairman. Dr. Henry O. Marcy, who read a paper at the Association on N. S. Davis, "the Founder of the American Medical Association," asked the privilege of being permitted to contribute the first hundred dollars toward the cause. The committee appointed for this purpose to be known as "The Committee on N. S. Davis Memorial" will consist of one member from each state, Dr. Marcy being the member from Massachusetts.

CARD INDEX.

The profession has long felt the need of more valuable data in reference to the number of physicians in any state or county, and also in regard to preliminary medical education, previous location, etc. We are glad to note that the secretary of the American Medical Association has undertaken to gather a permanent biographical card index of American physicians, and that a directory of physicians containing such information is to be published by the Association.

"Such an index," as stated by the secretary, "will be of value in tracing a physician through various locations, making up matter for directories, etc., and in compiling statistics regarding the profession. This work has been begun and is now being carried on along two different lines, viz.: (1) The accumulation and indexing of biographical data in regard to members of the profession now engaged in active practice. (2) The accumulation of similar data in regard to graduates of the current year and of recent licentiates of state boards of health. This has been carried on through the assistance and with the co-operation of medical colleges and secretaries of state licensing boards. The amount of information on hand is considerable and is steadily increasing."

PRESIDENT ELECT OF THE AMERICAN MEDICAL ASSOCIATION.

Dr. William J. Mayo, Rochester, Minnesota, was, at the recent Portland session, elected President of the American Medical Association. Dr. Mayo was born in Minnesota in 1861, and received the degrees of A. M. and M. D. from the University of Michigan. Unlike that of most noted surgeons, whose fame has been achieved in large cities, Dr. Mayo's name is connected with a small city of 8,000 inhabitants, Rochester, Minn. Here he has built up his great reputation, refusing to accept flattering offers in larger cities and from prominent institutions. He is surgeon of the St. Mary's Hospital, which is now a well-known surgical institution, and which was originally built for his father, Dr. W. W. Mayo, by the Fanciscan Sisters. As Dr. Mayo's practice grew, he associated other physicians with him to the present number of sixteen, and from time to time additions have been made to the hospital. Built on thorough study, painstaking technic and accurate anatomic knowledge, Dr. Mayo's fame has become international. A hard worker he has mastered details so as to command the respectful attention of the foremost surgeons here and abroad until he has been recognized as one of America's greatest surgeons. The contributions to medical literature of Dr. William J. Mayo and his brother, Charles H. Mayo, who is closely associated with him, have been frequent and varied. Particular attention has been paid in their writings and public addresses to the surgery of the stomach and to the surgery of the biliary apparatus. As Dr. Rodman said in nominating Dr. Mayo, this is a deserved tribute to an able, worthy and honorable son of the West.

Medical News Notes.

Dr. C. L. Spohr and faimly are at Beulah, Michigan.

Dr. J. F. Jones and family are spending the summer at Ludington, Michigan.

Dr. and Mrs. A. C. Wolfe will spend the month of August in Ludington, Michigan.

Dr. and Mrs. Louis Kahn entertained a touring party from Anderson, Indiana and Chicago, for several days last month.

The Mississippi Valley Medical Association will be invited by the Columbus Academy of Medicine to meet in Columbus in October, 1906.

Drs. C. F. Hoover, F. C. Herrick, E. A. Hannam, Thomas A. Burke, S. H. Large, J. R. MacLeod, John H. Lowman and J. H. Quayle of Cleveland, sailed for Europe last month.

MEMBERSHIP OF THE AMERICAN MEDICAL ASSOCIATION.—The total membership of the American Medical Association, according to the secretary's report, was, on June 1, 1905, 19,285.

PROFESSOR J. HIRSCHBERG.—Prof. J. Hirschberg of Berlin, who was an honored guest of the section on Ophthalmology of the American Medical Association, was elected to honorary membership in the Association at the Portland meeting.

CITY HOSPITAL FOR PORTSMOUTH.—The Hempstead Academy of Medicine has adopted resolutions urging the city council of Portsmouth to make provisions for building a city hospital. The profession is unanimous in urging this action.

WALTER REED MONUMENT FUND.—The Committee on Walter Reed Monument, reported that the sum of $18,000.00 has been subscribed, $10,000.00 of which was contributed by members of the Association.

Any one interested in the following announcement may correspond with Dr. J. P. S., 302 or 517 South Broadway, Los Angeles, California. "Will sell my eye and ear practice to registered physician or optician and guarantee $250.00 a month profit on refraction alone—$1000.00 cash necessary."

FOR SALE.—In Western Ohio, a practice averaging about $2,000 per year. Present incumbent must give up practice, account of ill health. Splendid opportunity for a young man. Apply by letter to A. B., this office.

(The party inserting this advertisement will please communicate with editor).

PHYSICIANS HONORED.—Dr. W. S. Halsted of Johns Hopkins University and W. W. Keen of the University of Pennsylvania, were honored by having the degree of L. L. D. conferred upon them by the University of Edinburgh. The same honor was proffered William J. Mayo of Rochester, Minnesota, who preferred to keep his engagement to deliver the oration on Surgery at the Portland meeting of the American Medical Association, and therefore could not be present to accept the degree.

Periscope.

PUERPERAL THROMBOSIS AND EMBOLISM.—Richter (Fortschritte der Medizin, N. Y. Med. Jour.) has investigated the clinical history of 16,000 puerperal cases in Leopold's clinc, finding as a result 20 cases in which there was embolism, 78 of thrombosis, and 18 of puerperal pulmonary disease.A fatal result attended 69 per cent. of the cases of embolism, this result occurring almost always with the first attack. Inasmuch as embolism can be prevented in many instances, it is very important to have some guiding symptom which may excite suspicion of impending embolism when thrombosis is present. Such a sign is to be found in the increased pulse rate to which attention was called by Mahler, and which Richter found of positive significance in 63 per cent. of cases, while in 34 per cent. it was not of positive value on account of coexisting fever. In the cases of pulmonary embolism it was a determining factor in 42 per cent. of the cases, and lacked significance in 52 per cent. The increased pulse rate is of greater determining importance in thrombosis than increase in the temperature, or hyperemia in the loin and in the abdominal wall, or than pains in the hips and sides, all of which have been mentioned by writers as significant. The increase in the pulse rate indicates that on account of the closure of the veins by thrombosis and the necessity for a free collateral circulation there is increased antagonism to the heart action. It also indicates that with the degeneration of the heart which is common among puerperal women the increase of work which is imposed upon the heart can only be compensated by more frequent contractions. The ordinary opinion that there is greater danger from thrombosis of the pelvic veins than from thrombosis of the veins in the lower extremities is believed to be incorrect, and that on the contrary the latter is the more dangerous for larger thrombi are more likely to be separated in the latter condition and produce a fatal result. In the veins of the pelvis only small thrombi are usually liberated. The small emboli which may be liberated in the lungs give rise to symptoms which may indicate irritation of the pleura, pneumonia, bronchitis or infarcts. When thrombosis is suspected the proper prophylactic measures will consist in absolute rest, bandaging of the varicose extremities, and careful nursing.

THE SERUM TREATMENT IN PUERPERAL FEVER.—Bumm (*Fortschritte der Medizin*, N. Y. Med. Jour.), remarks that no serum has as yet been produced which causes any apparent result in cases in which the disease has invaded the tissues which are beyond those which were the original seat of the infection. On the other hand, he thinks there is no doubt of the efficiency of serum for cases in which the streptococci have not passed beyond the endometrium. He thinks this is also true even if the streptococci have invaded the blood, provided they have not also produced lesions and formed foci for development in the organs. Experiments upon animals have shown that the prospects of recovery become more encouraging the earlier the injection is made after the reception of the infectious material. The dosage should be regulated by the severity of the infection, the size of the patient (animal), and by the time that has elapsed since the infection was communicated. Bumm prefers the subcutaneous use of the serum, in large doses, to its intravenous injection. He administers it at the conclusion of severe labors, if there is disease of the placenta, if there is decomposition of the liquor amnii, and if fever has been present during labor. He reports an experience of nine cases in which the serum was injected. In all of these there was a decided fall in the temperature, and an increase in the polynuclear leucocytes in the serous discharge from the uterus, this being interpreted as an indication of improvement in the patient's condition.

THE HISTORY AND DEVELOPMENT OF SURGERY DURING THE PAST CENTURY.—Frederic S. Dennis (American Medicine), in a lengthy article concluded in this issue ably discusses the progress made by surgery during the last century. Among the blessings which he asserts it has brought to the human race are these: The annihilation of pain during surgical operations, elimination of sepsis after operations and injuries, eradication of physical suffering, restoration of sight to the blind, recovery of hearing to the deaf, return of lost functions to organs and glands, aseptic repair of injured parts, relief of the crippled and lame, restitution of speech and consciousness, return of activity to paralyzed members, removal of malignant disease, restoration of reason to the insane, correction of bodily deformities, alleviation of pain in disease, reaction from shock and collapse, cure of lockjaw and other infective processes, intervention of relief in intestinal perforation, extirpation of tumors from glands and cavities, cure of diseases and injuries of internal organs, resection of diseased viscera, excision of joints and necrosed bone, amputation of diseased members, cure of aneurism, removal of cerebral and spinal neoplasms, reduction of mortality in all surgical diseases, entire removal of mortality in some surgical diseases, restoration of health and reason, salvation of human life.

TUBERCULOSIS.—Norman Bridge, Los Angeles, Cal. (Journal A. M. A., March 25), insists on the importance of reinforcing the nutritive forces of the body as the chief agency in the cure of tuberculosis. The fear of draughts is a popular error; another is overfeeding and the recommendation of alcoholics. Still another is the indiscriminate recommendation of exercise, as if muscular development could help to resist the disease. He also opposes deep-breathing exercises. What we need is a safe and efficient method of putting a sick lung at rest in all unilateral cases. Another error is the use of ergot in hemorrhage, tending to increase the blood pressure, and the administration of normal salt solution in exsanguined cases, thus again distending the vessels and opening up their lesions. The patient is most likely to survive a large lung hemorrhage when the blood pressure of the parts is lessened to the utmost for the time. Still other errors are the recommendation of indiscriminate eating taxing the digestive powers, errors of clothing, the injudicious recommendation of change of climate. In Illinois, patients, by proper management, can be given 85 per cent. of the benefits of the very best climates. With the modern treatment of the disease properly carried out, in almost any climate its mortality can be reduced another 10 per cent., and this he maintains will be effected.

ABDOMINAL TUBERCULOSIS.—W. J. Mayo, Rochester, Minn., from his extensive experience with abdominal operations, of which about 3 per cent. were due to some form of tuberculosis, finds that tuberculosis peritonitis is much more frequent in females than in males, and that the explanation of this fact may be found in the frequency of tubal infection (Journal A. M. A., April 15). He has verified Murphy's observation of the patency and thickening of the tubes on one or both sides in these cases. In nearly all the peritoneal involvement was greatest near the infected tube, and this he attributes to proximity and not to gravity, as has generally been done. He explains the curative effect of laparotomy in these cases as acting in two ways: First, by the mechanical separation of the fimbriated extremity of the tube from the surrounding tissue; and second, after removal of the fluid, contact and adhesions with neighboring structures may wall off the infection from the general peritoneal cavity and enable nature to exert itself on a limited focus and to produce a cure. In some cases he has found appendiceal and not tubal infection as the cause. In the majority of cases, however, the localized focus of lupus of the tubal mucosa was the cause. He holds that the failure of laparotomy and evacuation of fluid in tuberculous peritonitis is due to reinfection from local lesions not removed, and in the mucosa of the fallopian tube, appendix or intestinal tract. In nearly every case the peritonitis has its origin in a local focus, primary or secondary, and, if the former, radical operation will largely increase the chances of its cure.

APPENDICITIS.—Channing W. Barrett, Chicago (Journal A. M. A., April 15), has analyzed the vital statistics of Chicago for the last fourteen years with special reference to appendicitis. He finds that it causes about 1 per cent. of the mortality from all causes. The first consideration is an early diagnosis. All troublesome appendices should be removed without waiting for an acute attack, and all acute cases should be operated on without waiting for pus, rupture, adhesions or a possibe interval. Perforation or gangrene with localized abscess should be operated on with drainage or removal of the appendix, according to the judgment of the operator, and operation is the more necessary if there is no walling off of the abscess. Acute appendicitis should be operated on whenever the patient's condition permits, unless he is clearly convalescing. In that case wait till the acute symptoms are over. Healthy appendices should be left alone. The above counsel does not contraindicate rest, stomach lacage or the withholding of food, any of which measures can be employed as needed with or without operation. Lastly, life is not the only question; time and after conditions are also important. Adhesions may be temporarily life-saving and later deadly. The waiting treatment favors them. After operation the patient is usualy up in from ten days to three weeks. The rest treatment takes a much longer period of time.

DIPHTHERIA INFECTION IN MINNESOTA.—F. F. Wesbrook, Minneapolis, Director of the Minnesota State Board of Health (Journal A. M. A., March 25), describes the methods of handling diphtheria epidemics in that state. The principal points insisted on are the needs of thorough laboratory examinations, repeated frequently if necessary where suspicious bacilli are found, isolation of cases and of hitherto unaffected individuals with simple sore throat and prompt executive action based on laboratory experts. After the system is well started, competent local medical authorities can be relied on, if sufficiently impressed with its importance. The experience in Minnesota has shown that this is perfectly practicable under most varying conditions, and this is proved by the history of the management of epidemics given in the paper. The experience of Minnesota seems to point to the conclusion that diphtheria infection is usually transmitted by almost direct exchange of the flora of the nose and throat. In institutional and school life the more independent the individual and the easier the individual isolation, the less is the diphtheria infection and the easier is its eradication.

THE ETHYLS IN GENERAL ANESTHESIA.

In a paper read before the Columbus Academy of Medicine, Dr. Goodman reported some original investigation in reference to "The Ethyls in General Anesthesia," published in the Lancet Clinic, July 22, 1905. He says:

Of all the products now in use as preliminary anesthetics, or as anesthetics for operations requiring but a short time, ethyl chloride or kelene is the most widely used. This product is obtained by the action of hydrochloric acid upon alcohol. It is a gas at ordinary temperature and pressure. As seen upon the market it is compressed into a colorless liquid; it is highly volatile and inflammable. Of its many varied uses as a local anesthetic we have neither time nor space to talk. As a preliminary anesthetic ethyl chloride is a splendid preparation.

Some three or four years ago, while riding on a train I chanced to pick up a Cincinnati *Enquirer*, and there in bold headlines was announced the fact that the surgeons of the Cincinnati Hospital had made a great discovery, and were using ethyl chloride as a general anesthetic. This was rather amusing. He reports that ethyl chloride has been used as a general anesthetic at Grant Hospital for about five years.

His method of administering this product is as follows: We place an ordinary Esmarch mask over the face, and spray the chloride onto it. If the operation is to be only a short one, continuous application in this way for one minute will produce anesthesia profound enough to keep the patient insensible to pain for at least three to five minutes. On awakening there is no nausea or giddiness. The confusion passes away in a few minutes, and the patient is able to converse in a natural manner. If, however, a major operation is contemplated, the ethyl chloride is applied in the same way for about thirty seconds, and then ether or chloroform is administered, giving it drop by drop, and increasing the amount gradually until profound narcosis takes place. The pulse is stimulated, the face flushed, and the respiration even and regular when ethyl chloride is given. The great advantage of this procedure is that the stage of excitement is entirely eliminated, and much less ether or chloroform is needed; hence, the after-effects of the anesthetic are lessened greatly. Nausea and severe vomiting are seldom seen after an anesthetic is administered in this manner. There seems to be no contra-indications to the use of ethyl chloride as a general anesthetic. It is safe in young and old. I have administered it many times, and seen it used hundreds of times without a single untoward symptom. But ethyl chloride is highly volatile, and hence expensive, as large quantities must be used owing to its volatility. The market price is high; the cost of its use for several minutes is from fifty cents to a dollar. In hospital practice this is quite an item. For the last two years we have used ethyl bromide as a preliminary and momentary anesthetic. This preparation is, I believe, the best of all when administered by one who knows its properties.

Ethyl bromide, or hydrobromic ether, is a colorless, inflammable, volatile liquid. It has a burning taste and a chloroform odor. This preparation, like the chloride of ethyl, has many uses, but we are concerned only with its use in anesthesia.

While interne at Atlantic City Hospital in 1900 we administered ethyl bromide about one hundred times. The methods employed for its administration were as follows: If the patient is a large man, or very nervous patient, or one of those big muscular hod-carriers that we see so often in the hospital, he recommends the quick method. This consists of dashing about one fluid dram of the drug upon a thick piece of gauze, and applying the same closely over the face. The patient is simply smothered in it. There are one or two struggles, and all is over. If the patient is very ill, not so nervous; or not so strong as to be able to overcome the etherizer during the administration of the ethyl bromide, he uses the slow method. This consists in applying the Esmarch mask over the face, and then gradually dropping about thirty or forty drops of ethyl bromide upon the mask. After two or three deep breaths a towel is placed over the mask, and in one half to one minute the patient is sleeping quietly, and the same procedure as before takes place with reference to the ether or chloroform. The odor is not unpleasant, and scarcely any irritation of the air-passages is produced. If properly administered there is practicaly no stage of excitement. The face is flushed, the ears red, the eyes injected, and the pupils more or less dilated. The heart action is accelerated, and the pulse increases in force. The respiration is quickened, and in some patients becomes snoring; but irregularity or arrest of respiration has never occurred. It does not produce nausea or vomiting. In fact, we seldom have any vomiting to amount to anything since we have been using ethyl bromide as a preliminary anesthetic. The duration of insensibility is brief, the awakening prompt, and there is little confusion of the mind when used for brief narcosis. Any untoward symptoms during or following the use of ethyl bromide are due to one or more of the following causes: 1. Inexperience of anesthetist. 2. An impure article. Let me impress upon you that only a pure article is safe. We use Squibb's only. It should be obtained in one-ounce vials and never allowed to stand around and decompose. 3. Some physicians have mistaken ethylene bromide for ethyl bromide. The former is very poisonous. 4. It should never be used about a gas light, as it is readily decomposed. 5. It should not be used in old men with sclerotic arteries without due caution.

Ethyl chloride and bromide are of inestimable value in labor cases, fractures, dislocations, minor injuries, examination of women, especially in virgins, and in examination over tender areas. It should be borne in mind that where complete relaxation of muscles is required it is necessary to add a few drops of chloroform.

The cost of ethyl bromide, bought as we buy it, is nineteen cents per ounce. The cost of ethyl chloride is eighty cents per tube. The amount of ethyl bromide used is about thirty to sixty minims, costing about one to two and one-half cents per application, while ethyl chloride costs about forty to sixty cents per application. Ethyl chloride leaves a garlic odor to the breath; ethyl bromide does not.

In conclusion he summarizes as follows: 1. For brief operations ethyl chloride and bromide are the best anesthetics. 2. For preliminary anesthesia, these products are not only convenient, but I would impress you with the fact that there is less danger when the exciting stage is eliminated by their use. Ethyl bromide is the better of the two. 3. Severe nausea and vomiting are seldom seen after a prolonged anesthesia when these agents have been used as preliminary anesthetics. 4. These ethyl products are heart stimulants and not depressants. 5. These compounds are absolutely safe in the hands of any man who understands anesthesia; nothing is safe in the hands of a novice. 6. The average time for producing complete insensibility is from thirty to sixty seconds, but seldom longer than thirty seconds.

The advantages of these ethyl products over chloroform are: 1. They can be given with the patient in any position. 2. Anesthesia is induced very much more quickly. 3. There is no struggling. 4. A measured dose can be given. 5. They are much safer. 6. The after-effects are trifling or absent.

Advantages over nitrous oxide are: 1. The anesthesia is of a better type; quieter; absence of suffocative symptoms. 2. No cumbrous apparatus is necessary. 3. The available anesthesia is about twice as long.

Advantages over ether are: 1. Much pleasanter to take. 2. Induction of anesthesia is much quicker and no struggling. 3. There is no cynosis or secretion of mucus. 4. Does not leave an unpleasant taste in the mouth or smell in room. 5. The after-effects are much less.

ANESTHETICS.

The following symposium on "Anesthetics" is taken from the Hospital of July 22d, of this year.

DUDLEY BUXTON (British Medical Journal), writing on the clinical aspect of the work of the Chloroform Committee, lays particular stress upon the administration of high-percentage vapour as being the great danger in chloroform anesthesia. Recent investigations show that a 2-per cent. vapour is sufficient, as a rule, to induce anesthesia, which can be maintained with about 1 per cent.; stronger than 3 per cent. should not be used. Deaths occur sometimes at the very commencement of administration. "A few whiffs are taken and the patient dies." These Dr. Buxton regards as parallel with similar deaths in the pre-anesthetic days, when occasionally the patient just before operation struggled, fainted, and never recovered consciousness. Death in such cases is attributable not to chloroform but to fright. Other deaths occur just at the commencement of the operation; some procedure, such as stretching the sphincter, or even the incision, causes the patient to stop breathing and induces, perhaps, fatal syncope. This is commonly attributed to shock, aggravated by imperfect narcosis. This teaching he considers not only erroneous but dangerous, for the practical outcome of it is that patients are often drenched with a strong vapour in order to rapidly induce deep narcosis before the operation is commenced. Now, experiments show that vagal reflexes of the most dangerous character are not absent and cannot be obliterated in even profound anesthesia; and, as Embley has shown, reflexes which produce dangerous symptoms in adequate but not profound narcosis do not necessarily destroy the animal, but such reflexes do prove fatal when they take place during profound narcosis. In Dr. Buxton's experience the clinical evidence supporting these physiological investigations is ample. He has often observed in cases where the exigencies of surgery have required very deep narcosis that reflex interference with respiration and circulation have been most serious and called for energetic measures to resuscitate the patient; while under light narcosis such reflex disturbances have been merely transitory and soon recovered from.

He believes that an apparatus which enables the anesthetist to see the amount of chloroform he is using will go far to prevent such fatalities. From practical experience of its use, he considers that the inhaler devised by Vernon Harcourt works satisfactorily. A weak point in this instrument is the great increase in the percentage of chloroform in the vapour which is produced by any shaking of the bottle, and it is nearly impossible to avoid all movement of the bottle. A modification has been designed whereby the bottle is fixed to a stand, so that no movement is necessary. Some anesthetists in using the inhaler have intentionally resorted to shaking the bottle when the induction was very prolonged; this is a very dangerous practice, as it is impossible then to know the strength of the vapour, which may have become concentrated much above safety point.

Crouch (British Medical Journal), has abandoned the inhaler after giving it a trial; he found in nine cases that the average induction period was twenty minutes, in two of the cases it was half an hour; this is a serious drawback in busy hospital work.

He has found that the attention of the anesthetist is too much concentrated upon the machine instead of upon the patient. In experienced hands the instrument may be satisfactory, but its *raison d'etre* is the exhibition of the drug in such a way that it may give a safe anesthetic in the hands of the inexperienced practitioner. The majority of anesthetists at present appear to think that a satisfactory regulating inhaler has not yet been devised.

Hewitt (Lancet), differentiates between "simple" and "complex" chloroform anesthesia; by the former he means the characteristic state of deep insensibility produced in subjects not undergoing any surgical operation; by "complex," the condition characterized not only by phenomena referable to the chloroform itself, but also by phenomena referable to the surgical procedure which is taking place, he points out that it is necessary to realize the difference between these states in order to understand the nature of the difficulties and accidents that may occur. Many of the phenomena commonly attributed to the anesthetic are in reality due to the operation. For example, reflex retraction of the tongue, laryngeal spasm, and general respiratory spasm are the result generally of surgical manipulations, and may bring about an asphyxial state quite foreign to chloroform anesthesia. He lays stress upon the prime importance of maintaining a free air-way for the patient—a matter, in his opinion, deserving more attention than the percentage strength of the vapour administered. He has himself tried and seen in use many appliances for adjusting the strength of the vapour, and on many such occasions he has observed evidences of asphyxia depending either on some condition in the patient himself preventing the free exchange of air, or upon the narrow channels of the inhaler through which the patient has been breathing.

While recognizing certain advantages in a percentage inhaler, he thinks that the disadvantages outweigh them. They are cumbrous, complicated, and liable to get out of order. They are, moreover, apt to become fouled, and are incapable of sterilization. To the man of experience a percentage inhaler is useless, and to the inexperienced man it is complex and requires a scientific attitude of mind not always to be obtained. He does not consider it advisable to induce chloroform anesthesia with chloroform, but recommends the nitrous oxide-ether sequence until the stage of excitement, the most dangerous time with chloroform, is over.

STUDY AND TREATMENT OF ANEMIA IN PORTO RICO

The commission appointed by the United States government in February, 1904, for the "Study and Treatment of Anemia in Porto Rico" has submitted a report to the governor of that island. This report covers 209 pages, and is printed both in the Spanish and the English language. The following is a brief review of the findings of the commission:

The commission was composed of experts in their special field, and the amount of work accomplished by these genttlemen, and the exceedingly painstaking manner in which they attended to every detail of the subject stamps this enquiry as one of the most scientific and thorough investigations ever undertaken in the cause of public health. As early as 1899, Dr. Bailey E. Ashford, who later became a member of this commission, discovered the parasite *ankylostoma* in the feces of anemic patients who were then crowding the field hospitals of Ponce. This was the first positive evidence that the disease in Porto Rico, known as anemia, was not the ordinary form, but *ankylostomiasis* or *uncinariasia,* produced by the parasite sucking the blood, and so prevalent did this disease become during the ensuing years that fully ninety per cent. of the population became affected.

When the commission appointed by the government of the United States began its investigation in Porto Rico, it established a hospital consisting of tent-wards, first at Bayamon and later at Utuado, the most anemic districts of the island.

The object of the treatment was first to remove the parasite and then to kill the anemia. To kill the parasite, thymol, malefern and betenaphthol were given, but the preference was for thymol. First, the patient received a purge of salts, and then on the following day he was made to fast until one o'clock, and then was given thymol in doses not exceeding four grammes; then another purge was given to remove the bodies of the parasite killed with the antiseptic. The purpose of the first purge was to clear the intestines of mucous, etc., so as to allow the thymol to act. The thymol and purge treatment was continued once a week until the feces showed no more uncinaria.

While thymol kills the parasite and the purges remove them from the intestines, also diminishing the amount of toxines in the system, these remedies only clear the field for a reconstructive process in the blood, which is necessary to restore the extremly anemic patient to health.

Iron was given in the severe cases of anemia. Pepto-Mangan (Gude) was the only proprietary remedy reported by the commission, the other remedies used being pharmacopocial preparations. That over eighteen pages of the report should be devoted to cases treated with Pepto-Mangan proves the high regard in which the commission held this preparation, and establishes the unrivalled clinical value of Pepto-Mangan (Gude) in one of the most severe forms of anemia, that of uncinariasis, or miner's anemia.

In reading the report of the commission, the unbiased character of the work stands out clearly, and yet the results obtained point so distinctly to the supremacy of Pepto-Mangan (Gude) that even if numerous other records were not available to prove the clinical value of this remedy, this report alone would suffice to establish Pepto-Mangan at once as the foremost hematinic known. The eighteen cases in which the commission used Pepto-Mangan (Gude) in the treatment of uncinariasis, were selected on account of their extreme severity, and thus these cases represent the most crucial test to which any iron preparation can be subjected. The results obtained with this treatment were extremely gratifying. In nearly all of the cases we find such notes as these: "Excellent condition," "Completely cured," etc., while the difference between the low count of the red cells and the low percentage of hemoglobin (some cases showing only 11 per cent.) at the beginning of treatment with Pepto-Mangan, and the nearly normal findings at the conclusion, affords convincing proof of the efficiency of the medication.

A noteworthy fact is that none of the patients showed any digestive disturbance after the administration of Pepto-Mangan, although the remedy was used for many weeks in each case. When we remember the extremely low state in which most of these patients were found on admission, and the fact that several suffered from gastro-intestinal symptoms incident to their disease, this detail is by no means to be underestimated. The observations of the commission were made under government control, and therefore the report may be regarded as a supreme test, and the efficacy of Pepto-Mangan in one of the most severe forms of anemia is proved beyond a doubt.

A NEW EDITION OF GRAY'S ANATOMY.

We are glad to note that Messrs. Lee Brothers and Company announce a new edition of Gray's Anatomy, to be published in the early fall. The revision has been conducted by J. Chalmers Da Costa of Philadelphia and a corps of special assistants.

Commensurately with the importance of the largest selling medical work ever published, this new edition will present a revision so thorough and searching that the entire book has been reset in new type. In addition to the changes necessary to bring it abreast of the most modern knowledge of its subject, several important alterations have been made with the view of adapting it still more closely to present-day teaching methods, and in fact to anticipate the trend of anatomical work and study.

Thus, while the older nomenclature is used, the new names (B. N. A.) follow in brackets; the section on Embryology and Histology at the back of the present "Gray" has been distributed throughout the new edition in the shape of embryological, histological and biological references and paragraphs bearing directly on the part under consideration, thus contributing to a better and easier understanding.

The illustrations have come in for their full share of the general revision, so that at this writing more than 400 new and elaborate engravings in black and colors have been prepared. "Gray" has always been noted for its richness of illustration, but the new edition far exceeds anything that has hitherto been attempted.

No medical text-book has ever approached 'Gray" in sturdy longevity and accumulating strength. Notwithstanding the many would-be competitors which during nearly fifty years have periodically appeared and endeavored to share its ever-increasing popularity, this wonderful creation of a genius who lived barely long enough to realize that his work was done—how well he never knew—goes on and on, each succeeding year bringing new friends and strengthening the fealty of the old.

The editor and publishers have spared neither labor nor expense to keep "Gray" at the forefront of anatomical knowledge, and there seems to be no reason to doubt that its next fifty years will pass as smoothly and as successfully as have those past.

SUGGESTIONS FOR REDUCING THE PREVALENCE OF SUMMER DIARRHEA IN INFANTS.

T. S. Southworth (Medical Record, July 29, 1905), says that a large part of the responsibility for the great infant mortality which recurs each summer rests on the medical profession, who have failed in their duty in anticipating such trouble by suitable prophylactic measures. These should date from the very birth of the child, and one of the most important is to urge breast nursing in place of bottle feeding. Over ninety per cent. of the deaths from gastrointestinal disturbances occur in bottle-fed infants, and it is safe to assert that the surest protection against the death of an infant from summer diarrhea lies in normal breast feeding. If the secretion of milk is scanty, it should be used for part of the feeding at least, and every effort should be made to encourage the flow. Much has already been accomplished in the way of educating the masses regarding the value of pure milk, but there is still a great deal to be done in this direction. Even after uncontaminated milk has been secured, however, it must be properly modified and kept cold, carelessness in the latter respect being sufficient to defeat the best intentions of the physician. Errors in weaning, neglect of apparently mild attacks of diarrhea, and the common diagnosis of teething, which is used as an excuse for almost any evidence of bodily derangement, are factors that must be combated. The sucking nipple is another distributor of infection that must be abolished. The physician's day's work, even if he sees a child but once, is to seek out and correct errors in nutrition, to combat popular misapprehensions, to further the use of clean milk, to warn the mother that at the very beginning of loose movements in summer she should stop the use of cow's milk in any form, clear out the bowels with castor oil, give water or cereal gruels only, and send promptly for the physician, since delay is so often fatal. Only through such personal, painstaking instruction of the masses can the desired end be accomplished.

Recent Medical Books.

DISEASES OF THE KIDNEY, DISEASES OF THE SPLEEN, AND HEMORRHAGIC DISEASES. By Drs. H. Senator and M. Litten, of Berlin. Edited with additions, by James B. Herrick, M. D., Professor of Medicine in Rush Medical College, Chicago. Octavo of 816 pages, illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net.

With the appearance of this, the eleventh volume of Saunders' American edition of Nothangel's Practice, the work nears completion, the final volume on the Heart being now in active preparation. Like the others, this volume can be taken as the acme of knowledge on the subjects embraced. Professor Senator's clear style, systematic arrangement of facts, and logical reasoning make his articles on the Kidney indispensable to the practitioner. The editor, Dr. Herrick, has enlarged on certain points whenever necessary, especially regarding treatment, diagnosis, urinary analysis, etc., so as to increase the value of the work to the general practitioner. He has also added articles on Cryoscopy and Phloridzin Glycosuria.

The sections on the Spleen and the Hemorrhagic Diseases were written by Professor Litten, whose pioneer work in these fields is widely known. The articles on the Mosquito and its relation to Malaria, on Splenic Anemia, on Congenital Icterus with Splenomegaly, and on the X-rays in the treatment of Leukemia have been brought down to date by the editor. Indeed, the editor's interpolations add greatly to the practical value of the volume, and we are sure such an authoritative work on these subjects has never before been published.

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GENERAL CONSIDERATION OF HERNIA.*

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It would seem upon casual reflection that I should apologize to the gentlemen present for the presentation of a paper upon a subject which has been recognized and studied since the days of the early Greek surgeons. But, when we consider the frequent errors in diagnosis, and mistakes in treatment of strangulated hernia, I think you will grant that an apology is unnecessary. I do not expect to add anything new or original to what has already been advanced, but rather to bring before you some of the more important surgical and diagnostic points in connection with the study of hernia. Personally I believe that the study of surgical anatomy, as applied to the more important localities of the body, would be far more beneficial than the discussion of many of the subjects which have become chronic. Believing that a thorough knowledge of anatomy is an essential requisite, permit me to review the more important points which concern the diagnosis and surgical treatment of hernia. Since time will not permit me to deal with all forms of hernia, I shall confine myself to those passing out of the inguinal and femoral rings, and known as inguinal and femoral herniæ.

Few general practitioners have taken the pains to study the manner in which the testes descend into the scrotum, and, since this is so closely allied to the subject, a description seems well merited. The testes are developed within the abdomen from the Wolffian bodies; and in early fetal life they are situated in the back part of the body. They lie, not within the peritoneal cavity, but, like the kidney, behind the peritoneum, which is adherent to their front surface.

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*Read before the Columbus Academy of Medicine, June, 1905.

From this position during the latter months of fetal life, they gradually descend behind the peritoneum, and enter the infundibular process through its mouth, which is the internal ring; reaching their normal destination, the bottom of the scrotum, during the last month of intrauterine life. Preparatory to the descent of the testes there is a pouch-like bulging of the lower part of the abdominal wall in either inguinal region. This pouch-like formation gradually deepens and finally the two join in the middle line to form the scrotum. Each of the pouches thus formed are lined on its inner side by a prolongation of the transversalis fascia. (Here called the infundibular process.) These pouches are empty and ready to receive the testes.

Extending from the testes as they lie in the upper and back part of the abdomen, down to the bottom of the scrotum, there is a fibrous structure called the gubernaculum, which serves to guide the testes down into the scrotal pouch. The testicle begins its descent about the six month of fetal life. The gubernaculum contracts and draws the testes toward the inguinal region. At the seventh month the testes arrive at the internal ring, which is the mouth of the infundibular process. It then passes into the infundibular process, and in so doing it brings with it a process of the peritoneum which is adherent to it. This is called the vaginal process of the peritoneum. At the eighth month the testicle is found in the infundibular pouch, together with the vaginal process of the peritoneum, and, during the last month of intrauterine life it is found at the bottom of the scrotum, together with its vaginal peritoneal process.

After the testes has reached the bottom of the scrotum, the vaginal process which accompanies it becomes gradually obliterated. This process of obliteration commences in the middle and extends upwards toward the abdomen, and downward toward the testis, so that, in the adult, all that we have left of this structure is a fibrous strand together with the vas deferens enclosed within the sheath of the spermatic cord. The lower part of this vaginal process remains as the outer covering or tunicæ vaginalis testis. Having reviewed the descent of the testicle which has made hernia possible, I now wish to consider the surgical anatomy proper. The inguinal region is that part of the anterior abdominal wall which lies just above Poupart's ligament and contains the inguinal canal through which passes, the spermatic cord in the male, and the round ligament in the female. This is the site of all inguinal herniæ. The structures here which I shall consider are, the aponeurosis of the external oblique, which is a strong, smooth, glistening fibrous expansion of the external oblique muscle. It passes downward and inward toward the middle line and joins its fellow on the opposite side to form the linea alba. The lower fibres are collected into a thick bundle to torm Poupart's ligament. This ligament is a strong fibrous band which extends from the anterior superior spine of the illium downward and inward to the spine of the pubes. Both these bony processes are easily made out; the latter is readily felt upon the upper border of the pubic bone about three-quarters of an inch from the symphysis. The fibres of the aponeurosis immediately above Poupart's ligament pass inward to the middle line and are attached to the symphysis, leaving a triangular opening in the aponeurosis called the external inguinal ring. This ring therefore is simply a split in the aponeurosis of the external oblique. Its outer—the lower border or pillar—is formed by Poupart's ligament.

Its inner—the upper border or pillar—is formed by those fibres of the aponeurosis which pass inward and are attached to the symphysis. The apex of this ring is directed upward and outward. The base corresponds to the crest of the pubic bone. Passing from the lower to the upper border or pillar are some stay fibres which serve to bind the pillars of the ring together, and are called the intercolumnar fibres.

Emerging from the ring we have the spermatic cord in the male and the round ligament in the female, together with the hernial sac—providing we have a congenital hernia. If we now split the fibres of the aponeurosis of the external oblique from the apex of the external ring upward and outward toward the anterior superior spine, we expose to view the free edge of the internal oblique muscle. This muscle arises from the outer half of Poupart's ligament. If the edge of this muscle is raised and drawn upward and outward for a short distance, we expose the transversalis muscle which lies beneath the internal oblique, and arises from the outer third of Poupart's ligament. Toward the outer part of Poupart's. ligament, where these two muscles arise, they lie for a short distance in front of the spermatic cord, and arching inward above the cord they join others to form the conjoined tendon, and descend behind the cord to be attached to the crest of the pubic bone. The conjoined tendon at its attachment to the pubic bone is placed behind the external ring, and participates in the formation of the inner part or the posterior wall of the inguinal canal. As a result of this inward and upward arching of the internal oblique and transversalis muscles, we have a weak point in the lower abdominal wall protected only by the aponeurosis of the external oblique. The internal ring is an opening in the transversalis fascia and located one-half inch above Poupart's ligament and midway between the anterior superior spine of ilium and the spine of the pubes.

The inguinal canal proper has no internal opening, nor is the canal a real one, but only a potential canal; made real by the passing down of a hernia or by the knife. With this brief review of the general anatomy, which will serve to refreshen your memories, I shall proceed to the subject proper, leaving further anatomical points to be considered with the different forms of hernia. When we consider that one out of every thirteen males suffer from rupture, we are forcibly reminded of the importance of the subject under consideration.

A hernia may be either congenital or acquired. In the congenital form the sac exists prior to the birth of the child, but the contents may not appear in the sac for months or years after birth. In the acquired variety the sac is formed after birth, and the hernia simultaneously appears. That hernia is more frequently observed in men is largely due to the fact that they subject themselves to greater strains; use more violent exercise and often receive serious injuries. We also know that hernia is more frequently encountered during the active periods of life; between the ages of sixteen or sixty-five years. Hernia was recognized by the surgeons of antiquity, but Galen was the first to study it with any degree of accuracy.

Numerous theories have been advanced regarding the causative factors of hernia. Even at the present time considerable controversy is being waged as to the most probable one. Lengthening of the mesentery, (pull theory) intra-abdominal pressure, inheritance, occupation, parturition, straining, abdominal tumors, ascites, old age, as well as several anatomical causes have been cited with more or less countenance.

That some general cause or combination of causes does exist, there can be no question. Upon close study of the different theories enumerated, it is my personal belief that an abnormal origin of the internal oblique and transversalis muscles from Poupart's ligament, arching upward and inward to their point of insertion—leaving the lower abdominal wall unprotected, is the most logical. With this anatomical defect existing, any of the various predisposing causes are much more prone to occasion hernia. McCredy has shown that 25 percent of all persons with hernia give an hereditary family history, and as Turk suggests, "What is more reasonable, that the parents, one or both, have a deficiency in the internal oblique muscle, and transmit the defect to their offspring." Gibney states that out of every 100 persons that are ruptured, 80 are inguinal, 10 are femoral and 5 umbilical. Obviously the inguinal form occurs more frequently than all other varieties, and it is apparent that the cause must result from some peculiarity of the inguinal canal. This theory becomes more evident when the descent of the testicle and the growth of the canal are studied. The two common forms of inguinal hernia are the external oblique or indirect, and the internal oblique or direct.

The indirect form enters the canal at the internal ring, traverses the canal and makes its exit at the external ring. If it becomes arrested in the canal it is known as an incomplete hernia or bubonecele. If it passes through the external ring and enters the scrotum, it is known as a complete or scrotal hernia. The coverings of such a hernia are the same as the coverings of the cord in the same situation, and are of little practical importance (the skin, superficial fascia, inter-columnar fascia, cremasteric fascia, and infundibularform fascia).

The different varieties of oblique hernia are due to congenital defects in the closure of the vaginal process. Occasionally the vaginal process does not close but remains continuous with the peritoneal cavity. If a hernia descends into this sac, which is preformed, it is called a congenital hernia. Such a hernia may not occur at first or even shortly after birth, but years subsequently. In this form of hernia the sac is very thin, the neck long and narrow, so that strangulation is relative more frequent and severe than in the acquired form. Again, the upper end of the processus vaginalis may close while the rest remains open—a condition which is the rule in early infancy.

If, under such circumstances, the hernia is forced down, carrying with it its peritoneal sac, there results what is known as an infantile hernia. Again, we may have the vaginal process closing only below, or just above the testicle. A hernia entering this preformed sac is known as a hernia into the funicular process. An acquired hernia is one where the sac is formed anew. My reasons for calling your attention to these varieties of hernia, is, that the operations undertaken for their cure differ in some respects. I do not wish to be misunderstood in saying that a diagnosis of the various forms of hernia can always be made before operation, because, more frequently than otherwise the type of hernia only becomes apparent at the time of surgical intervention. The history of the case will often assist in distinguishing the acquired from the other forms—in so much as it usually appears quite suddenly. And internal or direct inguinal hernia is one which emerges internal to the deep epigastric artery and passes directly through the abdominal wall at its weakest point, which is usually at the lower part of the abdominal wall in what is known as Hesselbach's triangle. This triangle is bounded externally by the epigastric artery, internally by the outer edge of the rectus muscle and below by Poupart's ligament. The conjoined tendon is stretched across the inner two-thirds of this space, the remaining portion of the space being filled by the transversalis fascia. This form of hernia occurs more often when the abdominal walls have lost their strength and are relaxed, and in old age, subsequent to any prolonged distension, or in emaciation following dyscrasiæ. Strangulation is not common in this form of hernia, and when present, occurs more often at the external ring. Its coverings are the same as the indirect form except that the transversalis fascia takes the place of the infundibuloform, and the conjoined tendon the place of the cremasteric. Upon inspection we find these two kinds of hernia differing as regards size, shape and position. The shape of a direct hernia is globular on account of the short neck. That of an indirect is pear shaped. A direct hernia is smaller and has little tendency, like the indirect, to follow the cord into the scrotum.

The position of the direct hernia is more internal, and again, if the finger can be introduced into their openings the pulsation of the deep epigastric artery can be felt internally, in the external hernia, and externally in the internal hernia. We may also feel the sharp edge of the rectus muscle internally in the direct form. The external form is often congenital, the internal form never. The external occurs early in life; the internal late in life. From these differences it would seem an easy matter to distinguish between the two forms, and so it would when the relations of the various parts are not much disturbed. In the old external inguinal hernia, the traction of an increasing weight enlarges the internal ring on its internal aspect, and in thus shortening the cord, makes it less oblique. Also if the rupture is irreducible some of the diagnostic points may be wanting, rendering it, therefore, difficult or impossible to distinguish between the two forms. It may seem—in a way —preposterous for me to reiterate the diagnostic points of hernia. However, it is not unusual for the surgeon to be called upon to confirm a diagnosis of, and operate on, an individual for strangulated hernia, when there exists instead an hydrocele or an acutely inflamed inguinal gland. Discretion, therefore, occasionally becomes difficult; while clinical falacies seem prone to improve one's diagnostic acumen.

A femoral hernia is not infrequently confounded with an inguinal hernia, but this should not occur if the landmarks (the spine of the pubes and Poupart's ligament) be borne in mind. An inguinal hernia always escapes at the external ring, just at the spine of the pubes, and lies above the fold in the groin made by Poupart's ligament, whereas, a femoral hernia protrudes below the fold, and if the finger can be introduced into the opening, Poupart's ligament can be felt, and the femoral vessels behind. Again, an inguinal hernia must always be internal to the spine of the pubes, while the femoral is external and below the spine and ligament. In obese subjects a useful procedure, which will often prove of value, is to make use of a line drawn from the anterior superior spine of the ilium to the spine of the pubes. This line represents Poupart's ligament.

All tumors above this line are therefore inguinal, while those below are femoral. Enlarged glands are frequent in this locality and are often mistaken for hernia and vice versa. This point of distinction is usually between the femoral hernia and an enlarged gland. Twice during the past month have I been called upon to differentiate between strangulated hernia and enlarged glands. In one case a femoral hernia (of five days' duration) was encountered, which necessitated the resection of two inches of the bowel, and the use of the Murphy button. The other case proved to be a suppurating inguinal gland. If due attention be paid to the systemic disturbance, but little difficulty should be experienced in differentiating between hernia and inflamed glands.

However, when a small femoral hernia, in which only a portion of the circumference of the bowel is included in the hernial sack, (the so-called Richter's hernia) where the obstruction of the bowel is not complete; where gas may be expelled, and even small fecal stools, with but little pain; only slight nausea; with a tumor the size of a hickorynut, moveable, with no impulse on coughing, I must confess, that in such a case it is not an easy matter to determine definitely with what we have to deal. However, we should bear in mind that an inflamed gland is either due to infection or metastasis to malignant disease elsewhere; that they are usually hard and frequently multiple, very much less mobile than herniæ and adherent to the tissues. There is not that anxious facial expression present in cases of enlarged glands—there is no nausea or sick stomach complained of; there are no colicky pains, distension or other symptoms of obstruction present. Hydrocele of the tunicæ vaginalis or encysted hydrocele of the cord are frequently mistaken for inguinal hernia. The history of the case, the insidious onset, and a swelling which usually begins near the testicle are suggestive. The tumor is tense, non-reducible, and there is no impulse on coughing, nor does the tumor diminish in size when the patient assumes the dorsal decubitis. Viewed with a transmitted light it is perfectly translucent.

Hydrocele of the cord is frequently observed in children and often diagnosed as hernia. The tumor is generally located between the external ring and the testicle. It is smooth, fluctuates, feels cystic and cannot be reduced. Varicocele need not be confounded with hernia, providing the clinitian examines the patient in both the standing and recumbent posture. In the latter the tumor disappears, because the blood vessels empty themselves. If you now invert the scrotum with the index finger in the external ring (having the patient rise to his feet), the tumor will at once reappear. Again, the peculiar worm-like feel is characteristic, and is due to the varices of the veins of the spermatic cord and panpinform plexus. Orchitis, hematoceles and new growths of the testicle may be distinguished from hernia by their history, constitutional disturbance and direct examination.

In the treatment of hernia I shall only consider the operative phase, referring to mechanical appliances for those cases, which, by reason of constitutional diseases, make any surgical intervention impractical. I do not hesitate at the present time to advise an operation for the radical cure of hernia in any individual under sixty-five years of age, providing no contraindications exist—and beyond this age providing mechanical appliances have failed to retain the hernia, or because pain and discomfort make truss life impossible.

Since the introduction of local anesthesia it is possible to operate a class of individuals who would be doomed to the wearing of an unsuitable truss, or face the dangers of an acute strangulation. Many of the operations for strangulation and the radical cure of hernia can be performed under local anesthesia without inflicting upon the patient any intolerable pain. I no longer believe in subjecting patients to the risk and danger of ether and chloroform when the operative procedure can be equally and as perfectly accomplished by locally infiltrating the parts. My past year's experience has demonstrated to my entire satisfaction the foregoing statement.

In dealing with the operative treatment of hernia, I shall describe but one surgical procedure which I have practiced for the past five years with such results and success that I have no reason for using any other method. The operation does not disturb the spermatic cord or change it from its normal anatomical location. I believe that if our wise Creator had seen fit or thought it a necessary precautionary measure to have placed our spermatic cord between the internal and external oblique muscles, or between the external oblique and the skin, he would undoubtedly have done so. Certain it is that the testicle and component parts of the cord do not functionate any better after they have been transplanted. But, on the contrary, as the result of the handiwork of man, I dare say, many individuals who walk our streets are as sterile as though they had in place of testicles, glass marbles or celluloid balls. Quite recently I had occasion to remove the testicle from a man who had been subjected to a herniotomy after the method of transplanting the cord. In this instance the cord was undoubtedly strangulated to such an extent that the testicle became gangrenous, and in time was followed by necrosis of the scrotal tissue. The testicle was simply lifted out with a pair of forceps as you would remove a buckeye from its hull.

In any operative procedure we should bear in mind that we are endeavoring to strengthen a weak abdominal wall, and that in reality we are performing a plastic operation. No single method will meet the requirements of all cases, but it will suffice in the larger number.

For the performance (successfully) of these operations the surgeon must possess a sufficient anatomical knowledge gained through actual experience, or best still, from operative work upon the cadaver, to enable him to distinguish the various structures and tissues of which he must make use in repairing the defect in the abdominal wall. The first step in the operation is to locate with as much precision as possible the external and internal ring. A curvilinear incision is then made extending from a point well above the internal ring, down to the spine of the pubes. This incision should involve the skin and all the superficial structures down to the aponeurosis of the external oblique. This lays bare the external ring, through which you see the cord and neck of the hernial sac. In making this incision we divide the superficial epigastric vessels, which should be clamped immediately with forceps, so that the tissues will not become stained with blood. In other words, a bloodless field should be maintained throughout the operation.

The next step consists in dividing the aponeurosis of the external oblique muscle from the apex of the external ring to a point well above the internal ring. The aponeurosis should now be well retracted; the lower part drawn down until the under or shelving portion of Poupart's ligament is well exposed. The upper flap is retracted inward toward the umbilicus exposing freely the internal oblique and conjoined tendon. This brings into view the inguinal canal proper. This should be split (up) dividing the fascia and the few fibres of the cremastor muscle near its origin from the lower boarder of the conjoined tendon. This may be accomplished by simply retracting the internal oblique and transversalis upward toward the median line. However, I find it much more satisfactory to divide the few fibres and fascia with a sharp knife. The next step is to free the hernial sac from the cord—and, at this point, allow me to remind you of the relationship that is sustained between the spermatic cord and the hernial sac. In the indirect form of hernia the sac is invariably placed upon the top of the cord, whereas in the direct form of hernia, it may be placed to either side or posterior to the cord. Likewise, the epigastric artery lies internal to the sac in an indirect hernia, and external to the sac in the direct form.

Remembering this anatomical relationship between the cord and sac, you will frequently save the unnecessary expenditure of time in locating the sac. This difficulty is, of course, not experienced when operating a strangulated or irreducible hernia, but only applies to the operation for radical cure where the hernia is already reduced. After locating the sac of an acquired hernia it should be carefully dissected free from the cord, well up and around the internal ring. The most convenient method to accomplish this is to use a piece of gauze and simply wipe the cord away from the sac. Care should be used not to injure the vas deferens in this part of the dissection.

If it be a congenital hernia, the sac is freed from the cord well down toward the testicle and a ligature thrown around the sac at this point, and the sac divided above the site of ligature, leaving the distal end of the sac to form one of the coverings of the testicle. The proximal end of the sac should now be dissected up as in the acquired form. The sac should then be pulled taut, taking care that the contents are well within the abdominal cavity. Now transfix the sac with number one chromosized catgut, tying tightly on both sides. This step in the operation, when properly executed, restores the continuity of the parietal peritoneum, and should leave a slight elevation rather than a depression. The next step consists in freeing the edge of the internal oblique and transversalis muscles, together with the conjoined tendon and bringing these structures over and suturing them to the under or shelving portion of Poupart's ligament throughout its entire length. Care should be exercised in not tying the sutures too tight so that the structures will be jugulated. Neither should you pass the needle too low under Poupart's ligament least you injure the femoral vessels.

As you approach the lower end, be cautious that you do not draw the conjoined tendon over so closely that the cord will become strangulated. Also be sure and pass one suture through the internal oblique and transversalis muscle above the internal ring. The aponeurosis of the external oblique should now be sutured well down to the spine of the pubes, taking care to obliterate all dead spaces, and leaving a sufficient opening at the lower end corresponding to the external ring, that will admit the tip of the little finger. All of these sutures are of number one and number two chromocised catgut and placed interruptedly.

Lastly the skin incision is closed with interrupted sutures of silkworm gut, not however until all the bleeding points have been secured, and the wound made so dry that it can be closed without drainage.

A large, thick ample dressing composed of gauze and cotton batting should be applied and held in place by a spica bandage. The dressing need not be disturbed until the end of one week, providing that the temperature and pulse indicate no infection. At the end of the week the dressing should be taken down, and the silkworm gut sutures removed. Contrary to the rules and teachings of all textbooks, I permit my patients to sit up after the third day and to use the commode at any time after consciousness is restored. Femoral hernia requires some special considerations other than that which applies to inguinal hernias. The inguino-femoral region is the passageway between the upper part of the thigh and the region above. Poupart's ligament bridges across the concave ilio-pubic margin of the hip bone, thereby forming a space. This space transmits the ilio-psoas muscle and external iliac vessels. The fascia investing these structures divides this space into two compartments, the larger of which is external and is occupied by the ilio-psoas muscle, anterior crural and external cutaneous nerves. The rest of this space is triangular in shape and is occupied by the external iliac artery and vein. Internal to the femoral vein and between this and Gimbernat's ligament is the femoral or crural ring. Like the inguinal it is only a potential canal. This canal measures one-half to three-quarters of an inch in length and tapers to its lower closed end, which is opposite the upper end of the saphaneous opening. The femoral ring is one-third larger in the female than in the male, which accounts for the greater frequency of femoral hernia in women. The boundaries of this ring are of much importance from their relation to the neck of the femoral hernia. To the outer side lies the femoral vein, in its sheath, and elsewhere the boundaries are firm, fibrous structures.

In front is Poupart's ligament, behind the thin upper end of the pectineous muscle. Internally there is a series of firm, fibrous structures attached to the ilio-pectineal line—such as the fascia latta, Gimbernat's ligament. This form of hernia is always acquired, never congenital, and occurs three times more frequently in women than in men. It is in this form of hernia that the greater number of errors in diagnosis are made, and patients treated for enlarged inguinal glands until irreparable damage is done.

I wish particularly to impress upon your minds the importance of a careful and painstaking examination of every individual suffering with symptoms bordering upon intestinal obstruction. Remember that a hernia in this locality does not imply a large tumor, but on the other hand a very small one, varying in size from a pigeon's egg to a hulled walnut. Remember also that a hernia once strangulated no longer imparts an impulse on coughing. Patients will often state that the enlargement has been present for months or even years without occasioning any inconvenience. Such statements may prove misleading, consequently they should be accepted with a certain degree of caution.

I should not feel that this paper has fulfilled its mission without referring to the treatment of strangulated hernia by taxis. I only mention it to condemn the procedure as obsolete, unsurgical and as it is usually practiced, very unscientific.

If you feel it is your duty to employ taxis, I beg of you not to persist. If you no not succeed within three minutes, you are no more likely to in three hours, and during the three minutes, unless you are extremely gentle, you will subject your patient to more danger from rupture of the bowel and the production of inflammatory changes than a half dozen surgical operations could possibly do. Far better to place the patient on his back, with the hips well elevated, with an ice bag or hot fomentations applied (as in your judgment seems more expedient), with a sufficient dose of morphine and atropine to relax the tissues and permit the hernia to care for itself. The more rational and conservative way would be to give the patient an anesthetic and employ taxis for a few moments—failing in this procedure to perform an operation for the radical cure.

Under favorable circumstances, and when the patient has not been allowed to go on until peritonitis or gangrene ensues, the mortality should be less than one percent. If the age of the patient or any constitutional disease be present which might contraindicate the use of a general anesthetic, we have recourse to local anesthesia. Many times during the past few years I have employed cocaine anesthesia to the exclusion of general anesthetics, using a solution of the strength of one-tenth of one percent. The tissues are thoroughly infiltrated along the line of the proposed incision until you have produced a well-elevated ridge. As the incision is deepened the underlying structures may be still further infiltrated. I have succeeded in performing this operation in all classes of individuals, young and old, obese and emaciated, without inflicting any unbearable pain. Among my patients have been several physicians, who, throughout the entire operation, have carried on an animated conversation.

CONCLUSIONS.

Operate all patients under sixty-five years of age where no contraindications exist. Operate all cases of hernia persisting in children after five years of age, where a truss has failed to cure. Operate every case of strangulated hernia—and be positive of your diagnosis in all cases where you have a tumor present in the inguinal or femoral regions. Do not procrastinate, and hope against hope, but operate early and save the life of your patient.

ABORTION, ITS ETIOLOGY, SYMPTOMATOLOGY, AND TREATMENT.

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In this day of far-reaching sociological problems, when the question of race-suicide occupies the minds and troubles the hearts of the children of men, this subject looms up largely on the horizon of practical affairs. That it is of more than passing importance none will deny; that it has to do with the inception of terrestrial existence ,we must all admit, and its causes, apprehension and management must of necessity appeal to the medical profession for their most conscientious care and attention. In comparative antiquity our subject has to do with the most ancient of all human ills, before cholera was known, or the Persians had ever invented syphilis or the lepra bacillus had been devised for the torture and destruction of our race; we may imagine some husky matron of the stone age sitting herself down upon a frosty fragment of paleolithic detritus and being but poorly protected by her abbreviated walking shirt, a cold was contracted, which by reason of its location and immediate effects caused the expulsion of the immature products of conception. From that time to this cold has been regarded as an etiological factor of prime importance in the prevention or destruction of normal gestational processes. The most comprehensive classification of the causes of abortion are: Traumatic injuries to the ovum or its uterine attachments—morbid conditions of the ovum. or to disease of the maternal organism. Under the first head must be included not only direct violence but also hemorrhages between the fœtal and maternal layers of the placenta, whether due to traumatism or a diseased state in either the mother or ovum. The immediate cause of almost every abortion is some abnormal state of the ovum, resulting in the death of the embryo, but this in turn may be due to some defect in the maternal organism, or for that matter to disease in the father, as shown by the frequency with which abortion takes place as the result of syphilitic contamination of one or the other or both of the parents. Habitual abortion as is well known raises the presumption of syphilis. As to pathologic conditions of the ovum, it is generally to disease of the placenta or a crippling of its respiratory and nutritive functions by effused blood, that the death of the embryo is brought about, although any obstruction to the vessels of the cord will, of course, produce like results.

Much stress was laid by the older writers on the "habit of abortion." It was taught that when several successive pregnancies in the same subject had ended prematurely, no matter what the cause, a habit was thereby established by virtue of which there was a tendency for subsequent pregnancies to end in the same way and at about the same time, even if the original causes were no longer operative. There may be some truth in this doctrine, but it does not now have so strong a hold upon medical opinion as formerly.

The exanthematous fevers it is well known, especially variola, are prone to cause abortion, either by infecting the embryo or by the tendency to hemorrhages, uterine and others, which they superinduce. Apart from these acute afflictions, certain depraved conditions of the maternal health may jeopardize the life of the fetus and bring about its premature expulsion, but on this score precise knowledge is limited.

Certain drugs when taken into the system of the mother may produce uterine contraction and the termination of gestation, such for instance as spurred grain and cotton root.

Surgical operations done upon pregnant women were formerly regarded as extremely dangerous to the existence of the unborn child, but of late this idea has become very much modified.

Various morbid conditions of the uterus and its appendages and surrounding organs are justly credited with producing a tendency to abortion, but cervical laceration does not seem to be as serious an obstacle to full term delivery as formerly supposed. No reliable data can be procured as to the frequency of this accident, but from the best sources of information possible, it is judged that a very large relative percent of births will be required to account for all the prematurely terminated conceptions.

Symptomatology.—In many instances of early abortion the ovum is cast off with very little disturbance beyond a slightly increased flow and some accentuation of pain, so that the affair causes little thought or comment and the physician is not consulted. From this insignificant manifestation the symptoms range all the way through the category of suffering and hemorrhage and inflammation to the most profound septicemic intoxication and eventually death itself.

To give anything like a complete description of the varying diagnostic features of this common accident would require more space than the limits of this paper would justify, suffice it to say that a combination of pain in and hemorrhage from the womb coupled with the history of a missed period should at once suggest the idea of abortion and after that the nicest diagnostic discrimination may be needed to settle the question.

In unmarried women the history is, of course, unreliable. A virtuous woman may deny menstrual irregularity for fear of exciting the suspicions of her medical attendant, and one of the other class will lie from principle, or lack of it, and for the purpose of misleading the physician. These are the most persistent and promiscuous liars to be found in the ranks of frail humanity, unless it be the drug fiends whose sense of verity has been entirely obliterated.

Uterine hemorrhage alone does not imply that an abortion is imminent, as it is well known that cervical bleeding may continue during a greater part or all of the period of gestation. Neither does pain alone though it may be intermittent, as intestinal colic may simulate the uterine contractions very closely. Perhaps the questions most difficult of solution are presented by cases that are seen after the process has progressed somewhat and the question arises as to whether abnormal substances found in the cervical or uterine cavity are true products of conception or the results of morbid conditions—such as membranous dysmenorrhea or possibly submucus uterine tumors, or the deciduous uterine membrane of ectopic gestation.

The difficulties in these cases are sufficient to call for the best endeavors of the ablest diagnostician, but fortunately the indications for treatment are usually so plain that a wayfaring man though a physician need not err therein.

Treatment.—First, prevention; second, management; third, after treatment. If the habit of abortion be admitted, its cause must be expected in some degeneration of the placenta whereby it becomes unfitted to carry on respiration and furnish nutrition to the embryo. This condition may be due to syphilis, in which case specific treatment is indicated.

In the absence of clues, some obstetricians have alleged an error of hematosis as the cause of repeated abortion, and have recommended the exhibition of potassium chlorate. Prominent authors have expressed doubt as to the foundation of the theory and the efficiency of the treatment. When the symptoms of abortion are imminent uterine sedatives, the horizontal position and strict quiet must be the lines followed if the pregnancy be prolonged to the normal limit and a living child result. Care in the use of narcotics must of course be used, else a habit may be formed that will be little less unfortunate than the loss of the fetus. Ergot may be used to check hemorrhage, but the uterine contractions which it may produce and which usually result from its exhibition, render it more dangerous than valuable. Viburnum prunifolium has acquired some reputation in late years as a uterine sedative, and also as a very nauseous drug. When it has become evident that abortion must take place, the safe conduct of the case calls for careful supervision and discretion. Care to maintain the integrity of the ovum should be exercised, for when it is expelled entire all fear for the future is at an end, and herein lies the safety and the difference between accidental and criminal abortions, as the latter generally have had the membranes punctured and fetus destroyed.

Extremists are given to energetic interference in all such cases while timorists trust too long to nature. In such a case the middle course is followed by the judicious. The best practice seems to be not to resort to forcible removal of the remnants of the ovum unless there are particular reasons for so doing. First, signs of sepsis; second, undue continuance of hemorrhage. In the operations and manipulations upon the uterus, during the process of abortion, the greatest care should be exercised to the end that inflammation may be retarded rather than precipitated, and it must be borne in mind that asepsis and antisepsis are not alone sufficient to prevent inflammatory action in this highly sensitive and vascular organ. Pain must be prevented, relaxation promoted, and quiet secured, so that the premature simulation of labor may proceed as nearly along physiological lines as possible.

INTESTINAL INDIGESTION.*

BY W. H. BENNER, M. D., TIFFIN, OHIO.

Synonym. Intesinal dyspepsia. Definition. A derangement in the functions of intestinal digestion, resembling in the more or less complete decomposition of the chyme, caused by defects in the pancreatic, biliary or intestinal secretions, or from deficient peristalsis, one or more of these, singly or combined; characterized by abdominal pain, distention and tympanites developing some hours after meals and nervous perturbation, anemia and emaciation.

Causes. Imperfect diet; over-eating; anemia; deficient exercise; worry; immoderate use of tobacco or stimulants; disease of the stomach, intestinal tract, liver or pancreas; malaria. Frequently inherited.

Symptoms. Intestinal indigestion may be either acute or chronic, the latter the more common. Acute variety, the result of an irritation in the duodenum, rapidly developed pain, flatulency, slight feverishness, coated tongue, loss of appetite, headache, pain in the limbs, usually terminating in a mild attack of diarrhea. If the attack develops rapidly, the sudden formation of gases causes a paroxysm of colic. Severe attacks as associated with disordered hepatic function, light-colored stools, slight jaundice and high-colored urine.

Chronic variety, resulting from a greater or less decomposition of the partly altered food from the stomach. Pain, varying in character, occurring from two to six hours after meals, with slight tenderness and some fullness in the right hypochondrium, epigastrium, or the umbilical region. Tympanites is marked, the result of gaseous accumulations which have developed from the decomposition of the intestinal contents. Dyspnea, the result of pressure against the diaphragm, is of frequent occurrence. Marked nervous phenomena develop, the result of the depressing influence on the nervous system of the absorption of the gases of decomposition or ptomaines; depression of spirits, sleeplessness, disturbing dreams, headache, vertigo, buzzing in the ears, deficient mental application, cardiac irritability, numbness and tingling in the extremities and pains throughout the body and in extreme cases, attacks of fainting or epileptiform and cataleptic attacks. The skin is harsh and dry, the bowels are sluggish or constipated and the urine is high colored, of increased density, decidedly acid and on cooling, deposits lithates, uric acid and oxalite of lime crystals. Functional derangement of the liver follows after a time, adding to the general distress.

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*Read before the Seneca County Medical Society, Tiffin, Ohio, August 17, 1905.

Diagnosis. With our present knowledge it is usually impossible to designate forms of intestinal indigestion, due to defects in the quantity or quality of either pancreatic, biliary, or intestinal secretions. Acute intestinal indigestion differs from gastric indigestion in the time of development of the various phenomena, in the latter the symptoms appearing almost immediately after meals, while in the former not appearing until from two to six hours afterwards. Chronic intestinal indigestion may mislead the physician, if the various nervous phenomena are of marked character and a careful history of the case is not developed. Prognosis. Favorable if proper and early treatment be inaugurated unless the result of an organic lesion.

Treatment. Acute variety, the result of indigested food, is best treated by opium in some form, to relieve the acute suffering, warmth to the abdomen and a prompt cathartic to cause rapid expulsion, or six or eight calomel powders (½ gr. calomel, 2 grs. soda); followed next morning by a saline or good big dose of castor oil. Chronic variety. Of the first importance is to the diet, which should be restricted in amount and confined almost entirely to articles which are readily digested in the stomach, such as beef, eggs, and milk. The hepatic, pancreatic and intestinal secretions should be stimulated by a course of alkalies, one of the most efficient being sodii phosphate and as an aid to intestinal digestion use extract of Nux 1-3 gr. every four hours or extract of pancreatis from 2 to 6 grains, with soda bicarbonate 5 to 10 grains, two or three hours after meals, will be found useful. In severer forms, if there is much distress in the region of the stomach, vomiting should be promoted by warm salt-water or other simple emetics. A favorite prescription of mine, which I have had most excellent results with in intestinal indigestion is, rhubarb compound with golden seal and pancreatin.

Old Ladies' Home Building.

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SEPTEMBER, 1905.

Editorial.

MEDICAL EDUCATION IN THE UNITED STATES.

The "Educational Number" of the Journal of the American Medical Association for the current year furnishes valuable information in reference to medical education and medical colleges in the United States for the year ending June 30, 1905. This Journal has, for several years past, collected statistics on this subject, the data being collated principally from college authorities, annual announcements, and reports from state examining boards. It is stated editorially in this issue that "there has been a distinct gain in the entrance requirements during the past two or three years." This change for the better is due, in part, "to a few individual colleges, but largely it is the result of concerted action on the part of several organizations which have it in their power to promulgate and enforce rules and regulations for the government of colleges. The state examining boards, in particular, have exercised a most wholesome influence by raising the requirements and by taking an active part in the regulation of preliminary or preparatory education."

The total number of graduates for the current year was 5000, a decrease of 141 below that of the preceding year. The decrease in the number of graduates from the regular colleges was 64, from the homeopathic 95. The total number of matriculated medical students was 26,147, this being 1995 below the year 1904; of these 24,119 attended the regular schools, 1104 the homeopathic, 578 the eclectic, 114 the physiomedical, and 232 unclassified schools; the attendance at the regular schools showing an increase of 457 over that of last year, while in the homeopathic schools there is a decrease of 205 below the attendance of the previous year. Of the total number of medical students for the year 1073 were women.

According to this report there are, at the present time, 157 medical colleges in the United States, or 9 less than there were for the preceding year. Of the total number 126 are regular, 18 homeopathic, 9 eclectic, 3 physiomedical, and 1 unclassified. "During the year 2 homeopathic colleges united, and one eclectic college changed its faith and is now teaching regular medicine. Six of the regular colleges listed did not confer degrees, teaching only the first and second years of the medical course. Three colleges (two regular and one homeopathic) are exclusively for women; 63 for men; 91 are coeducational. There are five schools to which only colored students are admitted, two less than last year, one having become extinct and the other now admitting both white and colored students. Three schools operate under the continuous course system, the year being divided into quarters, and the student being allowed to attend only a specified number of quarters or semesters in each calendar year. These three schools are located in Chicago. Sixty-eight regular colleges, 4 homeopathic and 1 eclectic college have a university or literary college connection or affiliation. Only two colleges (located in Chicago) impart instruction exclusively in the evening, and three colleges have both day and evening classes." * * * "Seventy regular colleges are members of the Association of American Medical Colleges; 14 belong to the Southern Medical College Association."

There is a notable increase in the length of term of many of the colleges. Last year 56.8 per cent. of the colleges maintained terms of less than eight months' duration, while this year only 39 per cent. were in this class. Last year 19 schools and this year 38 maintained nine months' sessions. "About 37.8 per cent. attended colleges having eight to eight and one-half months' sessions; 27.5 per cent. attended colleges having seven and seven and one-half months' sessions, while only 8.9 per cent. attended six months' sessions. Thus it will be seen that over one-half (61.8 per cent.) of the total number of students registered attended colleges whose sessions average from eight to nine months, whereas only 36.4 per cent. attended the short-term colleges. It is evident, therefore, that the length of the term does not sway the student in his selection of a college, because the majority of students attended the long term colleges. Students are more and more taking into consideration the standing of the college and what it has to offer. Fees, entrance requirements and length of term are secondary considerations with the better class of students."

In Ohio the number of students registered was 878. From Ohio colleges there were 230 graduates as follows: Pulte Medical College, 5; Toledo Medical College, 7; Cleveland College of Physicians and Surgeons, 16; Western Reserve University Medical College, 19; Miami Medical College, 22; Cleveland Homœopathic Medical College, 24; Starling Medical College, 30; Medical College of Ohio, 33; Eclectic Medical Institute, 37; Ohio Medical University, 37.

Only one new college has been organized within the year. The Kansas City Medical College, the Medico-Chirurgical College of Kansas City, and the College of Physicians and Surgeons of the same city, have been merged to form the medical department of the University of Kansas; the first two years of the course to be given at Lawrence and the last two at Kansas City and at Rosedale, Kansas; a new hospital having been erected by authority of the state at the latter city. The Ensworth Medical College and the Central Medical College of Saint Joseph, Missouri, have been consolidated under the name of Ensworth-Central Medical College. The Dallas Medical College has been merged with the medical department of Baylor University.

OBSERVATION AND RESEARCH.

In the last few years there has been great improvement in methods of teaching in the medical colleges, and physicians in general practice are giving increasing encouragement to laboratory methods. We are learning that when facts are presented and understood the memory will take care of itself. Evident as this truth is, it has been more or less ignored in medical education. However, the emphasis which is now being placed upon laboratory instruction is evidence that more correct methods are now being pursued, but even yet there is room for great improvement.

How frequently the medical student begins the study of anatomy from the text-book, memorizing the names of muscles, ligaments, and other structures, singly and in groups, and even studying their relations from the printed statement rather than by dissection. The better way would be for him to begin his study of anatomy in the dissecting room, and make several dissections of lower animals before beginning his work in human anatomy. His knowledge would be at first hand. He would think of anatomical parts and their true relations as derived from visual and tactile impressions, rather than simply, the names and descriptions appearing in his text-book. Then would memorizing be displaced by actual knowledge so associated as to be of practical value.

Laboratory work, when properly conducted, carries out this principle in all the important studies of the medical course. There is, however, need of greater facilities in this direction. The profession in general should emphasize its importance and constantly utilize its advantages. In a recent discussion, Dr. J. M. Dodson appealed to the profession to correct the present unsatisfactory methods by introducing in American medical colleges more extensive and more perfect methods of research. He combats the notion that practical training in medical education and research work are, in any way, incompatible or even separable. We sometimes hear it said that certain young physicians have the laboratory method, the implication being that they are, probably, for this reason handicapped for general practice, or that they may not excell as diagnosticians and prescribers. This is a grievous mistake. Research is the legitimate and necessary function of every medical school, and along certain lines should be carried out constantly by the practicing physician.

The real teachers and masters are they who contribute to the sum of known truth, whether it be in the fundamental sciences or the clinical branches. Dr. Dodson's contention is sound that teachers should be paid salaries so that they may be independent of other means of support, and that abundant hospital facilities should be provided. In discussing the possibility of improvement in the way of medical education he calls attention to the "advantages of having medical schools connected with universities, both on account of the association with collateral branches of instruction, and of the better chances of securing endowments and of thus encouraging research work."

Another essential of the ideal medical college is better preliminary training for its students. What the best high schools can give plus two years of literary college work is none too much to be required of medical students. It is not, of course, implied that the student is to acquire his knowledge entirely through original research. While the chief purpose of the medical course is the training of the powers of observation and of the mental faculties along medical lines the acquisition of many facts is essential, and for this the student must draw on the accumulations already acquired; but even here the subjects should be approached by methods of original investigation, as this is one of the most effective ways of teaching. "The union of research and instruction in the medical course secures the highest grade of instructors, affords almost the only basis for procuring pecuniary endowment, necessitates a better preliminary training, and provides a method of instruction that inspires and enthuses the student and affords the most logical and effective preparation for his life work." It would immeasurably "improve the character of medical practice," "elevate and purify medical literature," and enlarge the influence of the profession.

A MEDICAL LIBRARY.

The size and number of medical libraries is an indication of the standing, activity and intelligence of the medical profession in any given community. A good library is indispensable for physicians who expect to keep posted in the literature of their profession and a necessity for those who desire to have a broad knowledge of medicine, and especially for those who assume to teach, either in medical colleges or through the press. A large medical library should be regarded as an essential part of the equipment of every medical college, an indispensable possession of every city, and be easily accessible to every practicing physician, circulating departments carrying books to those remote from medical centres, The field of medicine is so broad and medical progress so rapid that no physician can maintain a private library sufficiently exhaustive to meet all his own wants. He cannot, usually, find room for more than the current medical books much less for complete files of the leading medical journals. He must look to the city, state or colleges to provide library facilities.

The physicians of this city, have, for a number of years, looked forward to the time when they shall have a valuable medical library. As early as 1850 an effort was made to have the State Medical Association collect books for the purpose. but very little, beyond the passing of some splendid resolutions, was done by this organization. A few years ago the Academy of Medicine collected together three or four hundred books and placed them in an alcove in the school library: but these were principally old volumes, many of them of considerable historic interest, but as no new books and no medical journals were added, and no provision made for further addition or care, the alcove has become dust-covered and forgotten. An effort is now being made, through the Columbus Academy of Medicine, to secure a medical library and separate reading room in the new Carnegie Library building, now nearing completion. It is to be hoped that the profession will unite in collecting here a creditable library. It is a golden opportunity for the Columbus profession to provide this much-needed auxiliary to medical education. We should have all the modern books and complete files of all the leading medical journals. Such a library would bring rich returns to the profession. It would furnish practical information to busy practicians, research and historic data to authors and teachers, and promote the literary and scientific spirit. Already we have several authors of medical works in our midst—larger library facilities would increase their number—and a more general use of the literature of the medical world, thus made possible, would give a tone of greater authority and the charm of greater completeness to the literary output of the local profession.

MOTIVES OF MEDICAL STUDENTS.

To the medical students who in the next four weeks are to matriculate in the several medical colleges—the portals to the honored profession of medicine—we extend a cordial welcome. We need make no exceptions, for, since their qualification as well as moral character have been certified to by the examining board, appointed at the suggestion of the profession itself, we must believe that they will all honor the calling with which they have decided to cast in their lot.

Their chief motives are not the attainment of wealth or fame or ease of life, but rather, we believe, that they may find an honorable calling with congenial work and adequate rewards. They should know that physicians rarely become wealthy, that they usually move in comparatively humble spheres, and that their calling is one of tribute and hard work. We trust they are attracted to the study because its mission fascinates them; because they feel that its studies and services would be to their liking, and that they could find joy in devoting their lives to its exacting duties.

It is a profession which admits of permanence of location, favors the acquisition of many and lasting friendships, and is replete with opportunities of doing good; a high calling requiring education and culture but one that furnishes constant opportunity for improvement, including the cultivation of social graces. It not only brings its votaries into contact with nature and nature's methods, face to face with her elements, processes and laws, but makes them faithful interpreters of nature and useful servants of humanity. They must study facts rather than opinions. They are to cultivate accurate observation and make it the basis of sound reasoning. Four years of serious study will reveal many of the laws of life and prepare them to be co-workers with nature in dislodging disease and in preserving health. It will be of pre-eminent value as a prevision for action, disarming pretense and sophistry and cultivating clearness of insight to guide them in their life work beyond the four-year-doored portal which they are now entering.

In an address to medical students Dr. Musser has pointed out three worthy motives for medical students: The pursuit of medicine as a vocation; the pursuit of medicine as an opporttunity for intellectual achievement; the pursuit of medicine as a means of fostering noble ideals.

"It is most noble,' 'he says, "that you should be willing to work, but it must not be the only motive; if so, at once you would be hedged about by shoals and quicksands. A career that exhausts all the physical strength that one possesses, that saps the centers of moral and emotional force, cannot fail but become one of dire drudgery, unless higher motives obtain.

"The pursuit of medicine enables you to foster ideals, humane and altruistic. Your imagination and enthusiasm had been fired, perhaps, by the daily observation of one whose life was dedicated to the welfare of a community; upon whom affection, respect, and adoration were showered. 'He went about doing good.' Heroism, kindness, charity, nobility of character were incarnate. All honor to him who has lived up to such ideal. Little wonder you should emulate his career. There are not a few in the annals of our profession; song and story have placed their names on ineffaceable scrolls.

"The pursuit of medicine enables you to seek truth. The profession of medicine gives you an opportunity for intellectual achievement of the highest order. It requires upon your part the constant employment of the highest faculty of the mind—reasoning. Essential to the exercise of this faculty are observation and experiment. Hence you aspire to be a constant seeker of truth. To acquire facts, to analyze their value and relations, and draw inferences will be your daily work. This fascinating exercise enables you to acquire a scientific habit of mind." Fortunate are you who has a scientific method for an impelling motive. "It not only unfolds truth, the only rational result in any science, but, let me tell you, it develops character. To conduct such methods means that we are determining truth. We employ instruments that must be true, reactions that dare not be false. We drill ourselves to observe the truth alone and to reject the false. Such cultivation enables one to realize that 'against all appearances the nature of things works for truth and right forever.' He who seeks this truth has no jealousy rankling in his bosom. The true man of science is not found in medical societies backbiting, snarling, conniving for advancement to the detriment of his fellows. The true man of science has no pretensions which override his fellows. Selfishness, envy, and sordid ambition have no stronger foe than the scientific habit. No one but the true man of science can see more the message of all great moralists, for is it not demonstrated to him in the laws of biology every day, 'Whatever a man does to another, he does to himself, whether it be good or evil.' "

OHIO STATE MEDICAL JOURNAL.

The first number of the Ohio State Medical Journal issued in July, presents a very creditable appearance. It is of convenient size, containing forty-eight pages. It bears on its first cover page, very appropriately, a map of the state with counties and medical districts plainly indicted. It contains the address of Dr. John B. Roberts before the Ohio State Medical Association on "Surgical Diagnosis in General Practice"; Dr. S. S. Halderman's presidential address and the address of welcome to the Ohio State Medical Association by Dr. Starling Loving; minutes of the last meeting of the Association; a paper by Dr. S. C. Ayres on "The Early Recognition of Glaucoma," and a "Report of Three Cases of Mushroom Poisoning," by Dr. S. G. Sewell, besides editorials and brief reports of several district and county societies. The July and August numbers give assurance that the official organ of the Ohio Association will rank among the best state medical journals published, an excellent substitute for the old bound volume annual. For those who desire bound volumes provision has been made whereby these can be secured at minimum cost.

HEALTH OFFICE BULLETIN FOR MONTH OF JULY, 1905.

This month has given 167 deaths to Columbus. Notwithstanding the increase in population, this is an average number for the last five years. In July, 1901, there were 152 deaths; 1902, 172; 1903, 184; 1904, 149; 1905, 167.

Cholera infantum heads the list with 31 deaths. Twenty-six of these were under one year of age; five were over one and under two. Medical authorities describe this disease as "An

Acute Milk Infection." It is a significant fact that almost all deaths from this disease are to be found among children fed on *artificial food, containing milk,* or on *unsterilized cow's milk.* Only an insignificantly small per cent. of infants fed wholly from the breast of the mother die of cholera infantum. The ordinary milk bacteria are usually harmless, but under some conditions, some species of these usually harmless bacteria, acquire virulency and produce toxins in sufficient amounts to produce intense gastric and intestinal disturbances. Hot weather, unclean vessels, bottles, rubber nipples, etc., are some of the conditions which contribute to this virulency. To protect bottle-fed infants a clean milk, properly cared for, is necessary. The housewife and mother must not forget that much depends upon the care of milk after it is delivered by the dairyman. The nursing bottle and rubber nipple should be thoroughly cleaned and sterilized after each feeding. The milk should be kept in clean receptacles, placed in a refrigerator, and kept away from other articles of food.

During the month the department inspected 31 dairies, of which 29 were in good condition, and 2 were bad. Of the 71 samples of milk tested 65 were good and 6 were fair.

Nine deaths resulted from typhoid fever. Forty-one cases were reported to the office. One must either assume that the type of typhoid is exceptionally severe or that only about one-half the actual number of cases were reported. This disease is entirely preventable. The infection is carried into the system by means of food or drink, usually by means of polluted water. It should be well known that our water supply is not a safe one. During the construction of the dam, and the building of the purification plant, on account of the number of men employed along the river bank and the manner in which many of them are compelled to live increased danger of water pollution exists. Daily tests of the water from the health office hydrant showed the colon bacilli present in the water on eight days of July. Thirty samples from as many different wells were examined. Of these thirteen were unfit for use, five were suspicious and twelve were usable. These facts should teach the people two significant lessons: (1) All city water should be boiled for drinking and culinary purposes; (2) well water in cities should be regarded as unfit for use, unless proved otherwise by a chemical and bacteriological test. The department will gladly examine, free of charge, the water from any well within the city.

The following is a list of deaths from various causes for July, 1905: Typhoid fever, 9; whooping cough, 1; diphtheria, 1; cholera nostras, 1; dysentery, 1; tuberculosis, 13; syphilis, 2; cancer, 6; diabetes, 1; leukemia 2; other general diseases 1; meningitis, 6; locomotor ataxia, 1; cerebral congestion and hemorrhage, 3; paralysis, 6; infantile convulsions, 7; tetanus, 1; organic heart disease, 14; angina pectoris, 1; aneurism, 1; emolus, 1; hemorrage,; 1; affection of larynx, 1; broncho-pneumonia, 2; pneumonia, 3; pulmonary congestion, 1; cholera infantum, 31; diarrhea (over two years), 3; hernia, 5; biliary calculi, 2; peritonitis, 2; brights disease, 8; accident of pregnancy, 1; congenital icterus, 2; lack of care, 4; senile debility, 6; suicide, 4; accident, 10; ill-defined causes, 2. Signed McKendree Smith, M. D., Health Officer.

SURGERY, GYNECOLOGY AND OBSTETRICS.

We are in receipt of the first two numbers of Sugery, Gynecology and Obstetrics, an international magazine published monthly by the Surgical Publishing Company of Chicago; Dr. Franklin H. Martin, Managing Editor, and Dr. Allan B. Kanavel, Associate Editor. Besides these, it has on its editorial staff many of the most distinguished surgeons in this country. It is octavo in size, each number containing about one hundred pages. Its illustrations, many of them colored, are unsurpassed in medical journalism. Its editorials are signed. They deal with live topics in a masterly style. It is evident from the early numbers that this latest addition to the list will take high rank among the best surgical journals of the world.

AMERICAN SURGICAL ASSOCIATION MEETING.

The meeting of the American Surgical Association, held in San Francisco on the 5th, 6th, 7th, was said to have been well attended, and the papers and discussions of unusual interest. This association was founded in 1881, at the suggestion of Dr. Samuel D. Gross, and has an active membership limited to 125. In his presidential address Dr. George Ben Johnson reviewed the life of Dr. Mettauer, of Virginia, a distinguished surgeon in the early history of Virginia.

Dr. R. Park read a paper on the relation of physiologic and pathologic secretions of certain of the ductless glands to general surgery. Dr. J. Collins Warren reported three cases of laminectomy for neoplasms of the cord with good results. Dr. William J. Mayo presented a comparison of methods of performing gastroenterostomy. Among others who presented papers at this meeting were Drs. Charles A. Powers, Robert T. Weir, A. J. Oschsner, Thomas W. Huntington, Emmett Rixford, George T. Vaughan, De Forest Williard, Richard H. Harte, M. H. Richardson, A. MacLaren and Dudley P. Allen.

The officers elected for the following year are: President, A. Vander Veer, Albany; Vicepresidents, J. E. Moore, Minneapolis; J. C. Monroe, Boston; Secretary, D. P. Allen, Cleveland; Treasurer, George R. Fowler, Brooklyn; Recorder, R. H. Harte, Philadelphia. Cleveland, Ohio, was chosen for the next place of meeting. Drs. George W. Crile, Cleveland; Charles W. Oviatt, Oskosh, Wisconsin; Harry M. Sherman, San Francisco, California, and Robert M. Johnson, Baltimore, Maryland, were elected to active membership.

DEATH OF DR. JOHANN VON MIKULICZ.

Dr. Johann Von Mikulicz died June 17, aged 55 years. He had been Professor of Surgery at Breslau since 1890. He was one of the founders of the Medical and Surgical Journal, and author of text-books and monographs covering the entire field of surgery. He was one of the foremost surgeons of the world, and a writer of rare ability. His death was caused by carcinoma of the pancrease, a disease, the alleviation of which had been one of his specialties.

Educational.

STATE MEDICAL EXAMINATION—RESULT.

The Ohio State Board of Medical Registration and Examination held its semi-annual examination of candidates for licenses to practice in Ohio, June 13, 14, 15, 1905. It was a written examination held simultaneously in Columbus, Cincinnati and Cleveland. The total number of graduates examined was 192, of whom 188 passed, two failed and two were refused certificates on other grounds than scolarship. The following is a list (by numbers) of those examined, together with their school and the average grade of each. Unless otherwise designated in foot-note or parentheses the year of graduation is 1905:

Miami Medical College, Cincinnati.....572, 84; 576; 87 582, 90; 585, 87; 587, 84; 593, 94; 594, 85; 597, 82; 598, 83; 607, 80; 609, 88; 612, 88; 614, 80; 619, 93; 626, 90; 630, 93; 631, 88; 632, 91; 636, 91; 637, 85. Average 87.15.

Eclectic Medical Institute, Cincinnati..573, 80; 586, 95; 588, 80; 592, 83; 605, 75; 606, 88; 620, 88; 621, 85; 624, 93; 635[1], 77; 700[2], 88; 772, 70. Average 83.5.

Pulte Medical College, Cincinnati.........574, 85; 622, 85; 625, 91. Average 87.

Medical College of Ohio, Cincinnati....575, 93; 577, 89; 578, 89; 579, 90; 580, 89; 581, 88; 583, 86; 584, 94; 589, 86; 590, 92; 591, 91; 595, 90; 596, 85; 600, 93; 601, 92; 602, 88; 608, 87; 611, 87; 615, 93; 616, 87; 617, 94; 618, 90; 623, 87; 627, 87; 628, 85; 629, 85; 633, 93; 638, 85. Average 89.1.

Hahnemann Medical College and Hospital, Philadelphia, Pa..599, 90.

Leonard Medical School, Raleigh, N. C...........603, 75.

College Physicians and Surgeons—Medical Department University of New York.......................(1902) 610, 92.

University of Michigan—Homeopathic Medical College, Ann, Arbor, Mich......613, 88; 678, 90; 717, 86. Average 88.

Cincinnati College of Medicine and Surgery..(1901) 634, 83.

Western Reserve University—Medical Department, Cleveland, Ohio.........652, 90; 654, 88; 673, 93; 679, 96; 680, 92; 681, 88; 685, 90; 686, 89; 687, 92; 688, 97; 689, 88; 690, 88; 694[1], 91; 701, 88; 719, 91; 720, 92; 721, 87. Average 90.58.

Cleveland Homeopathic Medical College..653, 88; 657, 90; 662, 90; 663, 89; 664, 85; 691, 79; 692, 92; 695, 81; 698, 86; 703[1], 85; 715, 83. Average 86.18.

Cleveland College Physicians and Surgeons......655, 84; 656, 92; 671, 95; 672, 89; 674, 96; 676, 90; 677, 91; 682, 81; 683, 91; 684, 87; 699, 89; 705, 89; 714, 92; 718, 82. Average 89.14.

Queen's Medical College, Toronto, Ont.....(1904) 660, 81.

Baltimore Medical College......................661, 89.

Johns Hopkins Medical College, Baltimore, Md..693[3], 93; 712[3], 90; 731, 90. Average 91.

Western Pennsylvania Medical College..697[1], 92; 713, 96. Average 94.

Harvard Medical School, Boston, Mass.....(1902) 702, 83.

University of Toronto—Medical Department, Toronto, Ont. (1903) 704, 96.

Medico-Chirurgical College, Philadelphia.........710, 96; 711, 91. Average 93.5.

University of Michigan—Medical Department—Ann Arbor, Mich.. 716, 92.

Ohio Medical University, Columbus, Ohio.......722, 84; 726, 88; 727, 85; 728, 92; 729, 88; 732, 82; 734, 88; 735, 90; 736, 86; 751, 89; 752, 90; 754, 93; 755, 91; 762, 88; 763, 84; 771, 90; 776, 84; 777, 89; 778, 89; 779, 84; 780, 89; 781, 87; 782[1], 78; 783, 87; 784, 90; 785, 84; 786, 89; 788, 86; 789, 81; 790, 84. Average 86.96. Average for graduates of 1905, 87.24.

Starling Medical College, Columbus, Ohio.......723, 77; 725, 86; 730, 90; 733, 87; 737, 81; 738, 79; 739, 78; 740, 81; 741, 83; 742, 83; 743, 75; 744, 84; 745, 80; 746, 85; 747, 81; 748, 90; 749, 84; 750, 85; 756, 84; 757, 83; 761, 89; 764, 87; 765, 81; 766, 76; 767, 85; 770, 75; 774, 68; 787, 88. Average 82.32.

Medical Department University of Pennsylvania, Philadelphia......................................(1902) 724, 75.

Bellevue Hospital Medical College, New York....753, 85.

Jefferson Medical College, Philadelphia...758, 83; 759, 88; 760, 89; 775, 92. Average 88.

Medical Department of University of Buffalo—(1892) 768, 88.

Women's Medical College, Philadelphia...........769, 95.

Medical Department University of Iowa, Iowa City, Ia.—773, 80.

Detroit College of Medicine, Detroit, Mich..(1893) 791, 87.

American School of Osteopathy, Kirksville, Mo...792, 73; 793[3], 77; 794[4], 59; 795, 78; 797, 85; 798, 88; 799, 76; 800, 72; 801, 89; 802, 81. Average 76.8.

Steele School of Osteopathy, Des Moines, Ia.....796, 77.

Below passing grade: 772, 774, 792, 794, 800. Certificates withheld: 779, 780.

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[1] 1904, [2] 1881, [3] 1902, [4] 1901.

The following are the names of those who passed the state examination, June 13-15, and to whom certificates were issued by the board:

Theodore Bange, Cincinnati; John W. Barry, Jr., Springfield; Percy L. Barnes, Cincinnati; Francis E. Bertling, Cincinnati; Mora S. Bulla, Cincinnati; Harry L. Burdsall, Crosstown; George R. Bray, Cincinnati; Herbert A. Brown, Cincinnati; Walter H. Bush, Madisonville; Charles J. Chamberlin, Batavia; George W. Gliness, Cherry Fork; A. Reed Connor, Cincinnati; Robert Conrad, Cincinnati; Louis M. Cusher, Cincinnati; George E. Dash, Portsmouth; David J. Dickson, Cincinnati; Robert A. Elliot, Wapakoneta; John Emmett Fayen, Cincinnati; A. W. Foertmeyer, Cincinnati; George M. Galley, Cincinnati; Ernest R. Gamble, Sherrodsville; Sherwood P. Garrison, Cincinnati; George A. Havemann, Madisonville; James Edward Heap, Eaton; Charles M. Hendricks, Denver, Colo.; John Wesley Hutchens, Cincinnati; John Walter Irwin, West Union; Elmer Ellsworth Kimmel, Dayton; Francis F. Kramer, Cincinnati; Charles A. Langdale, Cincinnati; Thomas Longworth, Milford; George Everette Loverette, Cincinnati; Walter L. McKinney, Sharonville; Charles J. Otto, Dayton; Michael A. O'Hare, Cincinnati; Holley H. Pansing, Verona; Jacob C. Poling, Ansonia; Goodrich Barbour Rhodes, Cincinnati; Frederick B. Samson, Cincinnati; William W. Sauer, Madisonville; Howard Francis Schell, Cincinnati; Ralph Harvey Smith, Blanchester; Lester W. Stacey, Cincinnati; William H. Strietmann, Cincinnati; Ernest Osborne Swartz, Cincinnati; Wesley L. Furste, Cincinnati; Martin Harley Urner, Cincinnati; J. Byron Van Horn, Cincinnati; Allison M. Van Horn, Findlay; David S. Watson, Edison, O.; George H. Werk, Cincinnati; Charles M. L. Wolf, Forest; John D. Wonder, Dayton; Charles J. Woods, Ansonia; Leslie Allen Woolf, Atwater; Henry A. Zimmerman, Cincinnati; Edward O. Fox, Harrison; Raymond E. Gaston, Montgomery; William S. Kautz, Cincinnati; Miriam Schaar, Cincinnati; Leon G. Tedesche, Cincinnati; Sylvester Wilhelmy, Cincinnati; Richard D. Doughty, Pandora; Michael L. Landman, Cincinnati; George Goodhue Kineon, Cincinnati; Charles L. Wertheimer, Cincinnati; Norman William Ingalls, Granger; Jesse L. Saddler, Cleveland; Fred J. Rittersoach, Nevada; Herbert L. Plannette, Cleveland; William Colegrove Tuckerman, Cleveland; Fridolin Aeberli, Cleveland; George C. Leach, Cleveland; John D. Stevenson, E. Liverpool; W. H. Williams, Cleveland; Philip Lee Ring, Martin's Ferry; Arthur W. King, Cleveland; Albert H. Lanzer, Cleveland; Milo Pember Rindge, Cleveland; Newton S. Banker, Canton; Arthur P. Schulze, Cleveland; Eugene A. Spenzer, Cleveland; Philip A. Jacobs, Cleveland; Media Andrews-Bunker, Cleveland; Arthur Maitland Cheetham, Cleveland; Edward Peterka, Cleveland; John Roy McDowell, Medina; Albert Mealy Dunlap, Cleveland; Harry H. Ward, Cleveland; Charles C. Crawford, Minerva; William Palmer, Lucas, Cleveland; James M. Seliskar, Cleveland; James Douglas Pilcher, Cleveland; Joseph Charles McFate, Cleveland; Claude Leroy Difford, Cleveland; Arthur Garfield Wilcox, Cleveland; Braden C. Tiffany, Aurora; Aretas E. Biddinger, Cleveland; Thomas W. Clarke, Cleveland; Carl H. Lenhart, Cleveland; William F. Rohland, Cleveland; Stewart G. Patton, North Jackson; Franklin E. Cutler, Cleveland; Charles H. MacFarland, Jr., Cleveland; Albert C. McGee, Mayfield; Everton J. Lawrence, Cleveland; Arnold F. Furrer, Cleveland; Homer E. Griswold, Cleveland; John Phillips, Cleveland; Armand J. Prudhomme, Cleveland; Charles Howard Bee, Marion Center, Pa.; Walter F. Keating, Paulidng, Pa.; David H. Dolley, Cleveland; John Heberding, Youngstown; Franklin R. Walters, Chagrin Falls; Henry L. Wells, Cleveland; Charles F. Jump, Toledo; Virgil L. Weir, Warren; J. Gordon Griffin, Cleveland; Oliver A. Weber, Miamisburg; Ernest H. Cox, Cleveland; Shandor H. Solomonson, Cleveland; Murch Russell, Wellsville; Ralph Homer Smith, Lancaster; Charles C. Crosby, Columbus; Guy Eugene Noble, St. Marys; William Edward Durr, Stelvideo; Erwin C. Garber, Dayton; August B. Gudenkauf, Sidney; Archie Allego Sweet, Dayton; Joseph Omar Stout, Lithopolis; Lewis Frederick Smead, Columbus; John Loran McAllister, Beaver; Benjamin Renick Kirkendall, Derby; Barton Webster Beatty, Byron; Frank Oldt, Dean; Nathan Hammond, Otsego; Ewing Dwight Piper, Armstrong Mills; Clarence S. Latham, Hilliards; Joseph Stanley Shinn, Christiansburg; Charles Adams Finefrock, Prospect; Felix C. Harmon, Glandorf; Charles Holmes Kraner, Pickerington; Lewis Harris Brittin, Gambier; John Millard Morse, Milford Center; Edward Beatty Roller, Fairfield; Vogt Galen Wolfe, DeGraff; Ernest Lee Crum, Tiffin; Carl Ross Knoble, Galion; Ralph Waldo Dawson, Columbus; Charles Porter McKee, St. Marys; Karl Clark Brashear, Columbus; Willis K. Keenan, Quaker City; Oscar H. Sellenings, Chillicothe; George Hiram Matson, Jr., Columbus; John F. Sheffield, Carbondale; O. E. Northrop, McConnelsville; Harry Burr Larimore, Danville; Levi Albertus Ruhl, Covington; Frank A. Ewers, Akron; Thomas Elmer Williams, Hillsboro; Harry A. Slusser, Dayton; Jesse John Heaton, McCutchenville; Willmer Hammond, Otsego; Robert Benson McLaughlin, Mt. Liberty; Carl Wood Hoopes, Marysville; Jasper William Jolley, Richwood; Allen Coburn, Becketts; Emma C. LeFevre, Columbus; Edith C. Kline, Gilboa; Hershel J. Zeis, Tiffin; Adoniram Judson Quimby, Blaine; Harvey Chas. Maurer, New Bremen; Edison Burns Starr, Springfield; John McCrory Thompson, Lore City; Willard Grant McDade, East Liverpool; Ora Otis Fordyce, Columbus; Joseph R. Montgomery, Dayton; Thomas William Clark, Columbus; William E. Lloyd, Westerville; George L. Wililams, Newark; Francis E. Reed, Van Wert; Edwin H. McKinney. Fredericktown; William R. Bebout, Wheeling, W. Va.; Rush Robinson, Columbus; Samuel Van Kennedy, Monongahela, Pa.; Clinton J. Altmaier, Columbus; Frederick J. Champney, Perrysburg.

Certificates were issued to the following osteopaths: David H. Reese and William E. Reese, St. Marys; Daisy E. Washburn, Port Clinton; Ida M. Conklin, Lima; James E. Cobb, Cleveland; Lewis C. Serenson, Elmer T. Phelis, Toledo, and Mary Giddings, Cleveland.

EXAMINATION QUESTIONS.

OHIO STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION.

June 13, 14 and 15, 1905.

Anatomy—1. Name the divisions of the intestine, and give approximate length of each division. 2. Briefly describe the kidney. 3. What is the celiac axis? Where? What are its branches? 4. In amputation of the arm at juncture of middle and lower thirds, what structures would be severed? 5. What bones enter into the formation of the wrist joint? 6. Describe the marrow. 7. Give the gross anatomy of the ear. 8. Give the origin and distribution of the facial artery. 9. What bones form the orbit? 10. Name the twelve pairs of cranial nerves.

Chemistry—1. What is atomic weight? What is a compound? What is a mixture? 2. Define the terms crystal, element, precipitate, specific gravity, saturated solution. 3. Give the chemical names for Epsom salts, Rochelle salts, oil of vitriol, prussic acid, chalk. 4. What is the chemical difference between acids having the termination ous and ic—for example, sulphurous and sulphuric acids? What names are given to compounds of such acids? 5. What is the treatment for poisoning by strychnine? by morphine? 6. What is the normal quantity of urine? What is the test for earthy phosphates in urine? for sugar? for albumin? 7. Give the principal constituents of milk. How would you detect water adulterations in milk? 8. What kind of water would you consider pure for drinking purposes? What impurities could you determine by chemical tests? 9. Is wood alcohol, ethyl or methyl, alcohol? What is the effect of wood alcohol when taken internally? 10. Give a simple test for determining whether a substance is acid or alkaline.

Diseases of Women and Children—1. Give cause, symptoms, and treatment of prolapse of ovary. 2. Give differential diagnosis of ovarian cyst and ascites. 3. Give cause, symptoms, and treatment of anteflexion of uterus. 4. Give treatment of

(a) eczema of the vulva, (b) pruritus vulvæ. 5. Describe and give regional anatomy of the ureters. 1. Differentiate measles and scarlet fever. 2. Differentiate variola and varicella. 3. Differentiate membranous and spasmodic croup. 4. Differentiate simple and tubercular meningitis. 5. Differentiate follicular tonsillitis and diphtheria.

Materia Medica and Therapeutics (Regular)—1. From what is iodoform obtained; what is its action and how is it employed? 2. In the continued use of the potassium or sodium salts which is to be preferred? Why? 3. What percentage of morphine does powdered opium contain? 4. What change, if any, is produced by adding water to a fluid extract? 5. What are astringents; how are they classified? 6. Make a change in the following prescription which will correct the error, if any is found, and give your reason for such change. ℞. Tinct. gentian comp. ℥j. Tinct. of the chloride of iron. ℥ss. Water to make ʒiij. M. 7. Give the symptoms of poisoning by arsenic and name the antidote which should be employed. 8. What is colchicum; what preparations are employed in medicine; give some therapeutic indications for its use? 9. What are the symptoms of poisoning by digitalis? 10. What physiological effects are produced by iodide of potassium; explain the change which takes place in the salt when exposed to the atmosphere?

Materia Medica and Therapeutics (Homeopathic)—1. What are your choice authors on materia medica and why? 2. Define symptomatology, give its relation to pathology, also to the selection of a reliable prescription. 3. What are some of the essentials for a reliable proving? 4. Differentiate aconite, belladonna and baptisia in fevers. 5. Name three remedies with leading indications in cardiac diseases. 6. Differentiate apis and cantharis in cystitis. 7. Differentiate graphites and sulphur in skin diseases. 8. Differentiate the symptoms of the two veratrums. 9. Give three leading remedies for chlorosis, with indications. 10. What are the characteristic symptoms indicating arsenicum in diarrhea?

Materia Medica and Therapeutics (Eclectic)—1. Give a short definition of specific medication and specific diagnosis. 2. What are the indications and contra-indications for an emetic? Name three emetics. 3. Give the indications and contra-indications for a cathartic. Name three cathartics. 4. Define briefly decoction, infusion, suppository, cerate, unguent, tincture, fluid extract. 5. State briefly the medicinal uses of podophyllin. 6. Name three heart remedies and differentiate between the action of each. 7. When would you use aconite, belladonna, gelsemium, or baptisia in a fever? 8. What are the therapeutic uses of opium? When is it contra-indicated? 9. What are the uses of chloral hydrate? What is the dose? When is it contra-indicated? 10. Give briefly the specific indications for lobelia, ipecac, sulphite of sodium, nux vomica, bryonia, rhus, and colocynth.

Obstetrics—1. Define eclampsia; name some of its probable causes and the factors which influence prognosis. 2. What change in diameters of the fetal head results from flexion at the brim? 3. What are the natural presentations? 4. Give proper method of managing the third stage of labor. 5. What causes internal rotation in labor? 6. How manage a brow presentation? 7. How distinguish the fetal head from the breech by palpation? 8. What is deformity of the pelvis? Where does it most frequently present itself? 9. How may the conjugate be measured? 10. What dangers to mother and child are incident to a long-continued second stage of labor?

Physical Diagnosis—1. Define coma; state its diagnostic significance. 2. What is cyanosis? What are the conditions which produce it? 3. Define jaundice (icterus); mention its diagnostic value. 4. Define purpura, and state its diagostic significance. 5. What is the diagnostic significance of anesthesia? 6. Explain the diagnostic significance of the deep reflexes, especially of the knee-jerk. 7. Describe the physical signs in lobar pneumonia. 8. Describe the physical signs of the incipient stage of pulmonary tuberculosis. 9. Describe the physical signs of acute appendicitis. 10. Describe the physical signs of mitral incompetency.

Physiology—1. Describe the red blood corpuscles and their grouping. 2. What is the average number of red blood cells in one cubic millimeter of human blood? What circumstances may produce a variation in this number, and how great may be this variation within physiological limits? 3. Describe the heart sounds and their cause. 4. Give the location of, and describe the cerebral zone which governs respiration. 5. What part of digestion takes place below the stomach? 6. Describe the mechanism of vomiting? 7. What are the requirements of a physiological diet? 8. What circumstances or conditions affect body temperature? 9. How is an irritation or impulse from a nerve periphery conveyed to the brain? 10. What is the function of the skin?

Practice and Pathology—1. Name the different forms of anemia, with diagnosis and treatment of each. 2. Define hepatic colic and give cause, symptoms, and treatment. 3. Give cause, symptoms, diagnosis, and treatment of acute parenchymatous nephritis. 4. Give etiology, pathology, and diagnosis of croupous pneumonia. 5. Give causes, diagnosis, and treatment of chorea. 6. What pathological condition is present in an ordinary case of diarrhea? 7. How does remittent fever differ from typhoid fever? 8. Give complications and sequelæ of scarlet fever. 9. Describe the pathology of typhoid fever.

10. What are the causes, symptoms, and treatment of diabetes mellitus?

Surgery—1. Describe an operation for radical cure of inguinal hernia. 2. Describe some fracture with dressing for same. 3. Describe some dislocation with treatment for same. 4. Describe course of appendicitis, and in what stages do you advise operation? 5. Describe senile gangrene, with treatment for same. 6. Define surgical shock and give its treatment. 7. Give the causes, symptoms, and treatment of varicose veins. 8. Describe an amputation at the knee joint. 9. Define and classify osteomyelitis. 10. Give symptoms of intestinal obstruction.

Medical News Notes.

Dr. F. S. Rarey has returned from Magnetic Springs.

Dr. E. B. Mauk, of Delphos, Ohio, was in the city last month.

Dr. C. A. Cooperider and wife are on a trip up the lakes to Duluth.

Dr. and Mrs. J. F. Jones returned last month from Huntington, Mich.

Dr. and Mrs. B. I. Barbee have returned from their trip through the West.

Dr. Clarence R. Eshelman, of Fostoria, Ohio, spent a week in the city last month.

Starling Medical College opens on Wednesday, September 13, with a medical clinic.

Dr. and Mrs. C. S. Means have returned from their summer outing at Valier, Pa.

Dr. Clark Truman Elder and Miss Georgia Fraker were married August 29, 1905.

Dr. W. D. Hamilton and wife are spending a few weeks at Sagaponach, Long Island.

Dr. D. V. Burkett, who was injured bv being caught between street cars, has almost completely recovered.

The opening exercises of the Ohio Medical University will be held in Amphitheatre B, September 12, at 10 o'clock.

Dr. Harry Hamilton Snively and Miss Florence M. Knowlton were married in Plymouth, Ohio, August 19, 1905.

Dr. C. M. Wanzer, of Urbana, Ohio, has been retained as physcian-in-charge of the Champaign County Sanitarium.

Dr. John S. Curtis, of Washington C. H., died suddenly August 20. He was a graduate (1878) of the Medical College of Ohio.

The Board of Estimates of New York City has appropriated $17,000 to be used in conducting a crusade against the mosquito.

Dr. John B. Murphy has resigned the chair of surgery in the Northwestern University, Chicago, and will accept the same position at Rush Medical College.

Dr. Andrew C. Kemper, of Cincinnati, died August 15, after a long illness. Dr. Kemper was a graduate (1866) of the Medical Department of the University of Louisville.

Dr. George W. Hoglan, accompanied by his family, is at Mackinac, where he attended as a delegate the National Fraternal Congress which convened there in the latter part of August.

The publication of a directory of all licensed physicians in the U. S. was recommended to the trustees, by the house of delegates, at the Portland meeting of the American Medical Association.

DR. SABIN HONORED AT JOHNS HOPKINS.—Dr. Florence R. Sabin has been appointed associate professor of anatomy in Johns Hopkins University. She is a graduate of Smith College and of the Johns Hopkins Medical School.

The monthly session of the Seneca County Medical Society was held in the grand jury room, Thursday evening, and was largely attended. Dr. William H. Benner read a paper on "Intestinal Indigestion," which formed the topic of an earnest and interesting discussion.

The Convocation of Oxford University proposes to confer on Dr. William Osler the degree of Doctor of Medicine.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The American Medical Editors' Association convened for its "annual" at the Portland Hotel, Portland, Oregon, on July 10. Papers read and discussed at this meeting were as follows: "Medical Editorship as a Profession, as Distinguished from Medical Editors as a Prop to Practice," by James Evelyn Pilcher, M. D., Carlisle, Pa. "Medical Journal Trust and the Independent Press," by Dr. F. E. Daniels, Austin, Tex. "Medical Journalism as It Is," by Dr. John Putnam, Kansas City. "Abstract of Original Articles and Society Reports," by Dr. D. H. Craig, Boston, Mass. "Facts of Interest to Medical Journalists," by Dr. S. F. Brothers, New York. "Advice to the Editor of the Other Journal," by Dr. William Porter, St. Louis, Mo. "The

Medical Journal Outside of Medicine," by Dr. W. Lindsay, Los Angeles, Cal. Papers by Surgeon General W. Wyman, Washington, D. C., and by Dr. J. Macfarland, Philadelphia, Pa. Officers elected: President, Dr. Henry Waldo Coe; Vicepresident, Dr. Frank P. Foster; Secretary-Treasurer, Dr. J. McDonald.

Periscope.

Wm. B. Coley, M. D., of New York, has an exhaustive article in the Annals of Surgery of August on Final Results in the X-Ray Treatment of Cancer, Including Sarcoma.

He states: "That at the General Memorial Hospital, in February, 1902, through the liberality of Mrs. Collis P. Huntington and Mr. Archer M. Huntington, two X-ray machines were installed, and the work has been maintained up to the present time under the charge of Mr. W. P. Agnew and Dr. James Ogilvie, who have treated the cases under my direction during this period. During this time there have been treated, including a few cases treated by myself personally outside of the hospital, 176 patients, as follows: Sixty-eight cases of sarcoma, 36 of carcinoma of the breast, 44 of epithelioma of the head, face and neck, including tongue; 14 of deep seated abdominal growths, probably carcinoma; 5 not classified; 3 of tubercular glands of the neck; 3 of Hodgkin's disease; 3 of lupus, making a total of 167 cases of malignant tumors, sarcoma or carcinoma, in a total of 176 cases.

"In five of the sixty-eight cases of sarcoma complete disappearance was observed, but in every one of these cases there was a recurrence a few months later. In two of these cases the recurrent growths disappeared again under the combined X-ray and toxin treatment. These two cases are still well at present. Of the other cases one died of internal metastases, one a sarcoma of the pectoral region and axilla was a local recurrence. The fifth case, a sarcoma of the chest wall, involving the ribs and pleura, disappeared under the combined treatment with the X-ray and toxins, the X-ray having never been used alone. In this case there has recently been a recurrence which thus far has not yielded to further treatment with the X-ray or toxins.

Carcinoma of the Breast.—The thirty-six cases of cancer of the breast treated by the X-ray furnish almost every variety of diseases, from the cancer "en cuirasse," with extensive lymphatic involvment and œdema of the arm, to the small, superficial, recurrent cancerous nodules along the site of the old cicatrices. In addition, the X-ray was used in four cases as a prophylactic immediately after the operation for the primary growth. I regret to say that these cases furnish little encouragement for the use of the method as a prophylactic measure, since in every instance a recurrence took place within a few months, while the patient was still undergoing treatment. While in one case there was no definitely recoginzed recurrence in the pectoral axillary regions, the patient died of general metastases within a year's time. In two other cases, very small recurrent nodules, just beneath the skin in the neighborhood of the old cicatrix, disappeared after a few weeks' treatment, but in both cases there was a speedy return, and the treatment seemed to have little effect in checking the steady progress of the disease toward a fatal issue. He sums up the results of these cases in the following statement: "In my experience with the X-ray I have seen but one case of deep-seated carcinoma in which the tumor disappeared."

Epithelioma.—He states that forty-four cases of epithelioma of the head, face and neck were treated. "In this number are included cases of epithelioma originating in the lip or tongue, later involving the glands of the neck. Ten cases were epithelioma of the nose; ten superficial of the face. In only four cases did the disease disappear entirely. In every case in which there was involvment of the glands of the neck, no improvement whatever was noticed, and the rays had little, if any effect in retarding the disease. Of the three cases of lupus, the disease disappeared entirely in two and there was marked improvement in the third. After an exhaustive analysis of these cases the author gives his conclusions of the X-ray treatment of malignant tumors up to the present time as follows: I. That the X-ray exerts a powerful influence upon the cancer cells of all varieties, but most marked in cases of cutaneous cancer. II. In some cases, chiefly in superficial epithelioma, the entire tumor may disappear, probably by reason of fatty degeneration of the tumor cells with subsequent absorption. III. In a much smaller number of cases of depeseated tumors, chiefly cancer of the breast and glandular sarcoma, tumors have disappeared under prolonged X-ray treatment. In nearly every one of these cases, however, that has been carefully traced to final result, there has been a local or general return of the disease within a few months to two years. IV. In view of this practically constant tendency to early recurrence, furthermore, in the absence of any reported cases well beyond three years, the method should never be used except in inoperable cases, or as a prophylactic after operation, as a possible, though not yet proven, means of avoiding recurrence. V. The use of the X-ray as a pre-operative measure in other than cutaneous cancer is contraindicated, 1, because the agent has not yet been proven to be curative; 2, because of serious risks of an extension of the disease to inaccessible glands or to other regions by metastases during the period required for a trial of the X-ray.

ANALYSIS OF 221 CASES OF TYPHOID FEVER.—This series was reported by Dr. Thompson, of Worcester, Mass., before the Johns Hopkins Medical Society. The epidemic had started among workmen in one of the suburbs of Boston, and was traced definitely to a privy infection. The cases were treated at the Boston City Hospital. The majority were males and ranged in age from 8 to 63. Sixty-five per cent. were in the first three decades of life and 5 per cent. gave a history of previous attack. A motley array of symptoms were seen at the onset, but deafness was initial in three cases. Rose spots were present in 69 per cent., sweats were a striking feature in two cases, and herpes was noted in one case. Twenty-three and onehalf per cent. showed a subnormal leucocyte-count. Myocarditis was marked in two cases, thrombosis was seen in seven, infarct of the lung in one, and parotitis in two; nausea and vomiting were troublesome in five. Hemorrhage occurred in 22 patients, distension was marked in 23, and in two cases perforation occurred, both fatal. The spleen was palpable in 69 per cent. of the cases noted; true catarrhal jaundice was present in one case. Two showed epistaxis, three pleurisy, and seven bronchitis. The car was most often offected by the special-sense organs. Retention of the urine occurred in six cases, acute nephritis in two. Cystitis was seen three times, hematria twice. Two patients showed acute mastitis. One pregnant patient went to term normally during the disease and was delivered without event. Nocrosis of the nasal septum was seen once. The Widal reaction was positive in 93 per cent. of the cases noted. The mortality of the series was 12 per cent. The features exhibited by the cases were the frequency of atypical typhoid state, the notable implication of the central nervous system, and the inefficiency of the sponging as compared with treatment by tubs.—(Johns Hopkins Hospital Bulletin.)

THE DIAGNOSIS AND TREATMENT OF FRACTURE OF THE CARPAL SCAPHOID AND DISLOCATION OF THE SEMILUNAR BONE.—Codman and Chase in the June Annals of Surgery (Medical Age), say that in cases of dislocation of the semilunar without fracture of the scaphoid it is best to attempt bloodless reduction, even if many weeks have elapsed since the injury; or if this fails a palmar incision should be made, and a further attempt made at reduction. In cases of dislocation of the semilunar combined with dislocation of the proximal portion of the fractured scaphoid an attempt at bloodless reduction should be made, and if successful the wrist should be kept fixed to obtain union in the scaphoid; but if bloodless reduction fails, and it is necessary to make an incision, it is better to excise both the fragment of the scaphoid and the semilunar than to replace either one or both. If cases of either of these lesions are not seen until years after the reception of the injury, excision would only be indicated as a means of relieving troublesome pain.

TREATMENT OF CEREBROSPINAL MENINGITIS.—Franca (Deutsche med. Wochenschrift) (Medical Age), says that during the epidemic of cerebrospinal meningitis in Lisbon in 1902 the mortality of 47 cases in which the patients were treated by lumbar puncture alone was 63 per cent. In 9 patients treated by lumbar puncture and injections of cyanate of mercury it was 66 per cent. In 58 patients treated by lumbar puncture and injections of one-per-cent lysol solution it was 29.3 per cent. The writer drew off 25 to 50 cubic centimeters of cerebrospinal fluid and injected 3 to 9 cubic centimeters in children and 12 to 18 cubic centimeters in adults of a one-per-cent lysol solution. The injections were repeated every day until the fluid was sterile, which was in a few days. Patients treated in this manner were noticeable by reason of a lack of emaciation and trophic disturbances.

MODERN TREATMENT OF TUBERCULOSIS.—C. O. Probst (Journal of the American Medical Association, May 20, 1905) (Medical Age) describes the modern pure air, rest, and dirt treatment of consumption, and insists especially on the individualizing of the treatment. Otherwise the patients may come to think the physician of very little use. He has a poor opinion of ordinary tents as affording insufficient ventilation and holds that exercise should be especially controlled by the physician. In conclusion he emphasizes three points: First, the supreme importance of early diagnosis; second, the strict enforcement of a daily regime, reduced to writing and carefully planned for each individual case; third, the necessity of a comprehensive understanding of the character of the patient, a knowledge of the nature and extent of his lung lesion, and a full appreciation of the importance of even the minute details of his environment.

BRONCHO-PNEUMONIA IN CHILDREN, TREATMENT OF.—Dr. T. Zangger (Monthly Cyclopedia) reports ten cases of broncho-pneumonia in children three months to eleven years of age in which defervescence was realized in one to four days. The author ascribes this favorable result to his method of giving the little patients from one to seven "half-baths" of four to seven minutes each, the water at a temperature of from 30° to 28° C., gradually reduced to 26° or 24° C. (86° to 82° F., reduced to 78° or 75° F.). The room must be moderately warm, and the child must be placed in a bath-tub with only enough water in it to cover the body, leaving the breast almost uncovered with water. The child is rubbed during the bath, and after two minutes cool water is added to bring the water down to the desired temperature. The child is then rubbed dry with warm towels and put back to bed. These half-baths are given night and morning; a little milk is given to the child before and after the bath. The diet should be milk, diluted or not, and cold spring water should be sipped frequently. The author's experience has been that these baths twice a day raise the blood-pressure, strengthen the heart, promote expectoration, and soothe the nerves, etc., much better than any other measures. T. Zangger (Correspondenz-Blatt für Schweizer Aerzte, Bd. xxxv, No. 1; Journal of the American Medical Association, June 3, 1905).

BURNS OF THE THIRD DEGREE.—All extensive burns, says Dr. A. M. Fauntleroy (American Journal of the Medical Sciences, June, 1905; Monthly Cyclopedia), should be treated, if possible, by the continuous warm bath. This method is very restful to the patient, relieves the existing shock, and attention can be given to the burned area without handling the patient or removing dressings, both of which operations are always attended by more or less shock and no little pain.

When the sloughs have begun to separate, some form of more active continuous antiseptic irrigation, preferably aluminum acetate, is indicated. (The aluminum acetate could not be obtained for the case reported, and corrosive sublimte was used instead.)

While food is essential, it should be strictly liquid, and given in small but repeated doses. For the accumulation of gas in the intestines, which almost invariably occurs when the abdomen is involved, turpentine, in small doses, is strongly recommended, though the kidneys may be slightly diseased. The rectal tube is, of course, a useful adjunct.

For the shock, which is always present in extensive burns, besides the well-known methods for combating it, the intravenous infusion of normal salt solution will give oftentimes miraculous results. Extensive burns, of even over one-half the body surface, should not be despaired of, as the writer is of the opinion that heretofore the profession has been too prone to regard as hopeless a burn involving extensive areas. As a result of this, some of the methods and technique which, at least, should be given a fair trial when it is possible to do so, are liable to be neglected, or regarded as useless.

THE FIRST SUCCESSFUL CASE OPERATED UPON FOR APPENDICITIS.—Dr. Howard A. Kelly (Medical Notes and Queries) in his elaborate and beautifully illustrated work on the vermiform appendix, just issued, gives the late Thomas G. Morton the credit of performing "the first successful operation for the removal of the appendix, deliberately undertaken with an alternative diagnosis of the disease in that organ. The date was April 27, 1887, and the report of the case is to be found in the Transactions of the College of Physicians—not Surgeons, as stated by Dr. Kelly on page 44 of the book, or "Physicians and Surgeons" as will be found on page 46—for the same year. It is interesting to note that the patient upon whom Dr. Morton operated is still living. Dr. Morton in giving the writer an account of the case and the reading of the paper, said that Dr. John B. Deaver was present at the meeting of the College of Physicians at which the paper was read, and on leaving the hall was overheard to remark that "There was nothing in that paper of Dr. Morton's," and yet today Dr. Deaver possibly performs more operations for appendicitis than any living surgeon in the entire world. Dr. Kelly gives Krölein the credit of making the diagnosis and performing the first operation for appendicitis in February, 1884, the publication of the case being delayed until 1886. Death followed the operation and there was no autopsy.

TYPHOID PERFORATION.—Morris Manges, New York City (Journal A. M. A., March —), reports nineteen cases of perforation in typhoid, with sixteen operations and five recoveries. He discusses the subject generally, but emphasizes particularly the diagnostic significance of pain, which under certain conditions in this disease may accompany non-perforative peritonitis. He considers that the most important facts in the diagnosis are the marked change in the patient's condition with the abdominal pain, which is very variable, and that the other abdominal conditions, distension, rigidity, tenderness; liver dullness, etc., with the anxious facies and sweating, are valuable aids in the diagnosis. Changes in the rate and character of the pulse are of more value than temperature or respiration. Manges believes in the occasional spontaneous cure of this condition, and refers to one case in his series in which this apparently occurred, and to another, in which, at the autopsy, a small performation was found well sealed by omentum. The rule to operate, however, is not vitiated by these rare occurrences, and operation itself does not add to the dangers and may be effective in preventing a performation where one is not found.

Recent Medical Books.

P. Blakiston's Son & Co. are forwarding for our examination some advance sheets showing several pages of the text and a number of the illustrations of Dr. James K. Young's forthcoming publication, "A Manual and Atlas of Orthopedic Surgery." This book is destined to occupy a very important place in medical literature. It will be a quarto in size, of about 900 pages, and will contain upwards of 800 illustrations. It will be ready for distribution in a few weeks.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. By Professor Dr. Carl von Noorden. Publishers, E. B. Treat & Co. New York City, New York. 1905.

Volume VI of Diseases of Metabolism and Nutrition by Dr. Carl von Noorden, is now ready for distribution. . Its subject is Drink Restriction (Thirst-cures), particularly in obesity.

MALFORMATIONS OF THE GENITAL ORGANS OF WOMEN. By Ch. Debierre, Professor of Anatomy in the Medical Faculty at Lille. With eighty-five illustrations. Translated by J. Henry C. Simes, M. D., Emeritus Professor of Genito-Urinary and Venereal Diseases in the Philadelphia Polyclinic. Publishers: P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, Pa. 1905.

This little work is interesting as well as instructive. The first chapter is devoted to the normal anatomy of the genital organs. The second chapter to the development of the Genital Organs and the third chapter to malformations of the Genital Organs.

Anyone who is interested in teratology will be interested in a perusal of this book.

HANDBOOK OF ANATOMY. Being a Complete Compend of Anatomy, including the Anatomy of the Viscera and Numerous Tables. By James K. Young, M. D., Professor of Orthopedic Surgery, Philadelphia Polyclinic; Clinical Professor of Orthopedic Surgery, Woman's Medical College of Pennsylvania; Instructor in Orthopedic Surgery, University of Pennsylvania; Fellow of the College of Physicians of Philadelphia; Fellow of the Philadelphia Academy of Surgery; Fellow of the American Orthopedic Association; Member of the American Medical Association, etc. Second edition, revised and enlarged. With 171 engravings, some in colors. Crown octavo, 404 pages, extra flexible cloth, rounded corners, $1.50 net. F. A. Davis Company, Publishers. 1914-16 Cherry St., Philadelphia.

This little book, we have no hesitancy in stating, furnishes all that is claimed for it by the author. Whether it is a valuable book for students is a question for teachers of anatomy. Other than for convenience there is no abbreviated work on anatomy than can fill the place of the standard works.

The author has succeeded in making a thoroughly complete and accurate text and it must be admitted that it is readily accessible for reference and study. Students who do not care for the larger texts will find this one of the most valuable compendiums in the market.

THE SURGICAL ASSISTANT— AManual for Students, Practitioners, Hospital Internes and Nurses. By Walter M. Brickner, B. S., M. D., Assistant Surgeon, Mt. Sinai Hospital, Out-Patient Department, etc. 360 pages. 123 original illustrations of surgical instruments. New York: The International Journal of Surgery Co., 1905. Price, $2.00 net.

This splendid manual is one of the really important books of the year, inasmuch as it fills a place in medical literature that has hitherto been unfilled. It certainly meets a widespread demand in a highly acceptable manner, and it is sure to attain immediate and lasting popularity. The book in size may become the companion of the doctor or nurse, who will find in it many useful and practical suggestions.

One of the most valuable chapters is the tenth, concerning itself as it does with those important matters that may confront an assistant left to watch a patient just after operation. Vomiting, urination, pain, the arrangement of the bed and other numerous details are succinctly dealt with and a valuable table for differentiation between shock and concealed hemorrhage is incorporated. The management of these and all other emergencies that may arise is given in great detail.

The second part of the book deals with the most commonly performed operations, describing them step by step, from the assistant's standpoint. A regional classification is here adopted. With each operation is given a list of the instruments and accessories required and the manner of preparing them. The complete technique of intravenous infusion is accurately described.

In an appendix the preliminary preparation and routine after treatment of operative cases are very thoroughly described. It is a book that will prove of the greatest value to the young practitioner in his every day work. Surgical nurses should also be familiar with it. By careful study of its contents embarrassing delays and annoyances caused by inexperience or lack of knowledge on the part of the assistants and nurses may be avoided.

THE NATIONAL STANDARD DISPENSATORY. By Hare, Caspari and Rusby. Will be ready for sale September 1, the date when the new U. S. Pharmacopeia goes into effect. By authority of the Convention it will contain every article in the new U. S. P., as well as the explanations and instructions necessary to understand and apply the brief statements to which the official guide is restricted.

The National Standard Dispensary is a new work, a distinct improvement upon anything of the kind hitherto published. Its authors, Dr. H. A. Hare, of Philadelphia; Prof. Charles Caspari, Jr., of Baltimore; and Prof. H. H. Rusby, of New York, are all men of the highest eminence in their respective fields, and are all members of the Revision Committee of the U. S. P. It not only covers the new U. S. P. as aforesaid (and the chief foreign pharmacopeias as well), but the scarcely less important domain of the unofficial drugs and preparations so largely used. It offers full information regarding the pharmacognosy, the pharmacy, and the medical action and uses of all substances used in pharmacy and medicine at the present day.

Dr. Hare has again justified his reputation for knowing what is wanted by giving a compact and direct presentation of modern therapeutics in the section dealing with that subject in the case of each drug. The Appendix contains useful tables, formulas, etc., for practical work. There are two indexes, the general, covering all the names in the text, and so affording a guide to the drugs of the entire globe, and the therapeutic index, where, under each disease, are given all the drugs used in its treatment, with reference to the page where the conditions indicating a choice are found.

THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA. Eighth Decenial Revision, by Authority of the United States Pharmacopeial Convention, held at Washington, A. D. 1900. Revised by the Committee of Revision and published by the Board of Trustees. Official from September 1, 1905. P. Blakiston's Son & Co., agents. Philadelphia, Pa.

This revision is the result of the work of a committee appointed by an organization incorporated in 1900 for the purpose of the encouragement and promotion of the science and art of medicine and pharmacy by selecting, by research and experiment and other proper methods and by naming such materials as may be properly used as medicines and drugs with formulas for their preparation.

Attention is called to the changes in strength of tincture of aconite, tincture of veratrum and tincture of strophanthus. The strength of tincture of aconite has been reduced from 35 per cent. to 10 per cent., and that of tincture of veratrum from 40 per cent. to 10 per cent. The strength of tincture of strophanthus has been increased from 5 per cent to 10 per cent. These changes have been made in order to conform with the standards adopted by the International Conference on Potent Remedies held at Brussels in September, 1902, the object being to make uniform the strength of potent remedies in all parts of the world. These changes go into effect officially on September 1, 1905.

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HINTS FOR THE EARLY MANAGEMENTS OF MENTAL TROUBLES.

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The very incipient stages of all mental ailments are the most important periods for the necessary steps to be taken looking toward cure and amelioration. Sometimes the lapse of a few hours may convert a hopeful case into a hopeless one. Brain changes often progress with startling rapidity, and a process which may easily be stopped and controlled at its commencement soon passes into conditions beyond the reach of any remedial agencies. Like the small break in the levee, where a few shovels of earth will completely repair the break if applied at once, becomes an extremely difficult if not impossible task after the waters have cut out an opening large enough to permit the passage of a flood. Therefore it is highly important, not only to recognize very early the existence of mental change, but to begin the proper treatment for the interruption of the diseased processes and the restortion of normal functions. In this paper it is intended to deal only with one form of mental alienation, and that form perhaps the one most frequently met with, the most dangerous to life and future health, and withal the most promising for early care and treatment—namely, Melancholia. It is hardly necessary to say much concerning the symptomatology of this well recognized form of mental alienation, and yet it may be well enough to call attention, briefly, to some of the danger signals which usher in an attack. This is all the more important since it is too often so insiduous in its advent, and so unexpected that it is frequently mistaken for mere depression of spirits, neurasthenia, dyspepsia, hysteria, or some other trival sympathetic trouble until it becomes fixed to an extent requiring a much greater time to control than if recognized earlier in its progress.

Melancholia is essentially a mental pain. Whatever may be the cause of it, its nature is nearly always the same, and as it is, in a great many cases a functional trouble, it is therefore often amenable to treatment. As a rule it has little if anything to do with the ordinary affairs of life which usually cause melancholy. There is a broad difference between melancholy, and melancholia. The first is a normal emotion following any circumstance or condition tending to disappointment, sorrow, grief, or loss; while the latter is a pathologic condition which may bear no relation whatever to any of the normal emotions or passions. The mere expression, therefore of grief, or sorrow, even if long continued may be but the accentuation of a healthy emotion perhaps unreasonably indulged in, but may not approach the realm of disease. On the other hand, insanity caused by excessive grief or sorrow or disappointment, may find expression in hilarious mania, as readily as in melancholia, and in my experience this is more often the case. In other words the usual moral causes of insanity are not always followed by corresponding emotional symptoms; and melancholia is not, necessarily caused by, or preceded by circumstances or conditions which normally produce sadness, lowness of spirits or melancholia. The form assumed by insanity bears no relationship in its manifestations, to the causes of the disease, but frequently appears as the opposite. The profoundest meloncholy may never be followed by disease.

Shakespeare describes melancholy, not melancholia, when he writes of the one "who never told her love; but let concealment, like the worm 'i the bud, feed upon her damask cheek, and sat like patience on a monument smiling at grief."

Melancholia is usually rather slow in its onset, the depression of feelings approaching deliberately, and without any appreciable cause. This is not universally true, for the onset may be very sudden and entirely unexpected and the cause of it may be distinctly apparent. The cases which occur suddenly are the ones most likely to recover as suddenly as they appeared. The depression is prone to come on without any adequate cause; often, indeed without any apparent cause whatever. It is attended by a peculiar facial expression indicative of pain and distress. There is as a rule a slight rise in temperature, although this feature is not always found present. There is persistent insomnia, the patient getting but little sleep, and that usually disturbed by ugly dreams. There is likely also to be considerable anorexia, a loathing of food frequently, and sometimes a persistent refusal to eat. The attention is distracted and it is difficult to fix it upon any subject for more than a moment at a time. There is an anxious expression about the eyes, the supra orbital muscles being usually contracted into a frown which does not denote anger but mental pain. The skin is generally dry and harsh, and often dark in color, showing a sluggish capillary circulation due to a disturbance of the vasa-motor functions. The hair is generally dry and unruly, not responding to comb or brush. The urine is scant and highly colored; the bowels constipated, and the tongue almost universally coated. Often there is a perceptible odor of a disagreeable character emanating from the body of the patient, and the skin, instead of being dry and harsh, often has a greasy appearance and feeling. In many cases there is an inability on the part of the patient to shed tears although the facial expression and drooping posture of the head would indicate a copious flow of tears, until the head is raised and the face exposed when the eyes will be found perfectly dry. This symptom is more marked in the persistent class of cases, and is not present in all cases. Many times there are present delusions of a very distressing character; in most cases ill defined fears of impending ruin and indefinite catastrophies. These delusions are often, but by no means universally accompanied by hallucinations of one or more of the senses, usually the sense of hearing, when voices are heard. The voices may be accusatory in character, accusing the patients of all sorts of vile conduct; or commanding them to perpetrate the most cruel and brutal murders; or, the voices may be passive, that is the patient may be made to say improper and vulgar things, and to falsely accuse others of hideous social and other crimes. The sense of smell may be the seat of hallucinations and the patient may perceive the most disgusting odors which they believe are thrown over and upon them by some persecutor whose identity is often indefinite, and but rarely established to their satisfaction. Tactile sensibility is often the seat of hallucinations. A common delusion based upon an hallucination of feeling is that some person is continually throwing electricity over them. Delusions may exist for some time without being suspected, as the victims of melancholia are very averse to talking and it is often difficult, if not impossible to engage them in any connected conversation. The prognosis is not so hopeful in those cases where hallucinations are present, and particularly of hallucinations of hearing and smell.

Generally speaking we find two distinct forms of melancholia. There are other forms, but the two may be made to include all of the rest. These are the excited, or agitated, and the quiescent. In the first there is considerable activity of the body. The patient is restless and unquiet at all times, moving about from one part of the house to another as if pursued by a restless spirit which keeps him moving perpetually from place to place without allowing time for rest or repose. There is a constant moaning, wringing of hands and crying out without any perceptible or assignable cause. The language is vague and meaningless, consisting for the most part in the mere repetition of short ejaculatory remarks, such as "O my: O dear: O dear me," etc. The most persistent inquiry on the part of physician or friend fails to elicit any reason for this exhibition of grief, pain and worry. They are likely to resent interference with them, not by violence, but by a passive resistance which sometimes becames active to the extent of pulling away, jerking themselves from their attendants and becoming impatient over attempts to coerce them into the ordinary duties, such as undressing, preparing for bed or bath, going to meals, etc.

The other general form is indicated by absolute quiescence. The patients refuse to talk, to move, to take the least cognizance of or interest in anything that is going on about them. They frequently select one spot in a room, and insist on remaining there with bowed head, usually placed in the hands, or if not so marked as this they cannot be induced to take any interest in any subject, and do not apparently heed anything that is passing around them. In the lighter forms they may be induced to listen temporarily to remarks made to them, but the remarks do not make any apparent impression. The sad, melancholy aspect is unchanged, and they soon lapse into the hopeless expression even if temporarily aroused from their lethargy.

In making a diagnosis of melancholia the family history should be taken into very careful consideration. The same set of symptoms occurring in one having no hereditary history or predisposition would not excite the same alarm as when the taint was clear. Supposing a person becames depressed in spirits, loses interest in business and household affairs, neglects the duties they have been accustomed to perform, becomes careless and negligent in personal attire, shuns society and seeks seclusion, loses the disposition to talk or appear interested in the every day affairs of life, complains of headache and inability to sleep, and has wandering pains through the body. If there is a clear hereditary history of mental disease the probabilities are greatly enhanced that we have to deal with a case of melancholia, and that the certain symptoms of that form of insanity will soon make their appearance.

If the hereditary history is wanting the diagnosis should be delayed, as a certain proportion of hysterical cases, and cases of neurasthenia simulate melancholia very closely, and it often requires time to distinguish between them. In certain cases of hysteria all of the symptoms of melancholia may be present, but in addition thereto, there are, as a rule, a large assortment of symptoms not found in melancholia. For instance in hysteria the subjective symptoms are sometimes stretched out *ad infinitum.* The patient complains of particular things. She is desirous of talking about her situation and about her many infirmities, or if it assumes the quiet, non-talkative phase, she shows an evident pleasure in being considered sick and in exciting the sympathy and anxiety of those near her. The patient with melancholia, on the other hand, does not want to be disturbed. It annoys her to be spoken to or in any manner interfered with. While she cannot be convinced that any good can be done her, she does not take the pride in her disability that is so often shown by her hysterical sister. In other words the melancholic patient does not care for sympathy. She considers her case hopeless and does not care for the opinions of others. The hysterical patient becomes deeply offended if her ailments are slighted or doubted, but to the one with melancholia it makes no difference whatever to her as to what others think about it. They are both intensely egotistical and self-centered, but their egotism is widely different. In the hysterical it demands recognition and sympathy, while in the melancholiac it is merely a matter of constant introspection with the worst opinions of self. The one thinks she is deserving of and demands all manner of attention, and sympathy, the other that she is totally unworthy and should be punished, and is not worthy of any consideration whatever. All of these symptoms should be at once apparent to the careful observer and enable him to make an early discrimination between the two conditions, a very important matter as we shall see later, because the treatment of the two conditions is diametrically opposite, and a mistake in early diagnosis may be fraught with the most serious consequences to the patient.

The diagnosis between the neurosis called neurasthenia, which is an aggravated form of hysteria, perhaps, is attended with greater difficulties than in the other forms of hysteria. I cannot take up time now in the discussion of the differences, if any exist between hysteria and neurasthenia, nervous prostration, etc. They all differ widely in their nature and results from melancholia. And especially is this difference pronounced when we come to consider the treatment of melanchalia. In these neuroses, as in the more pronounced hysteria, the patient has innumerable complaints to make. They dwell upon their distressing symptoms and seem to multiply them each day. Usually the entire body is affected; the mind sharing in the general wreck of all the organs, and the various symptoms are dwelt upon and particularized, and remedies are sought for; unlike melancholia where the patient refuses to talk of her symptom and as a general rule refuses to take medicines. The depression of spirits is not as persistent as in melancholia, nor is the melancholy so profound. The main difference, however, consists in the readiness with which the victim of neurasthenia talks about her case, and the persistent manner in which the patient affected with melancholia either refuses to talk or evades conversation directed to her condition. Her complaints are never specific. When she makes any statements at all, they are very general in character. She complains of wretched feelings, but does not refer them to any part of the body. She is always vague, and if she has any localized pain it requires persistent cross-examination to get her to locate it. If she has a headache, for instance, it requires the direct question to elicit the fact. She is uncommunicative in regard to all matters unless she be the subject of delusions, when she is sometimes willing, or even anxious to talk of them. Ordinarily she is very quiet, however, refusing to take part in any conversation and showing no interest in anything passing around her. Except in the excited form of melancholia when the patient is restless and wanders aimlessly over the house refusing to be quiet, she is found sitting in some particular place, exhibiting all the signs of severe mental distress, replying in monosyllables to questions directed to her, and evincing no interest in what is said or done in her presence.

Krapelin has described a form of disease which he denominates dementia praecox, one division of which seems to be simple melancholia. There are, as pointed out, some resemblances between melancholia and dementia, and it seems to me that the distinction made by Krapelin is one tending to confuse rather than to enlighten the mind concerning the distinction. The main point is the loss of memory and failure to appreciate surroundings in dementia, while the same faculties are sharpened in melancolia. In dementia the face is entirely different from melancholia. It betokens vacuity rather than distress. The supra orbital contractions are for the most part wanting, and when present are associated with other facial expressions of mental cloudiness which we do not find in melancholia. In all forms of dementia the faculties are dulled, and the intellect clouded and confused. Memory is either obliterated, or very materially blunted. Perceptions are slow and stupid, and attention is markedly diminished. In melancholia these faculties are all sharpened, although there may be an apparent failure to respond to questions, they are, as a rule perfectly understood, and will be likely to be remembered. All the mental activites are increased but the overwhelming mental distress so occupies the mind that the attention cannot be commanded.

To express the thought in a little different manner it may be said that in melancholia the mental faculties are preternaturally acute in most instances, but the mental distress so absorbs the patient's attention that she refuses to enter into any conversation not related to her suffering, or to have her thoughts distracted from the melancholy channel in which they are traveling. As one with a terrible headache seeks solitude and resents intrusion of anything tending to excite or call for the expression of thought, so the melancholic patient seeks seclusion and refuses to be drawn into conversation or do anything which she apprehends will distract her thoughts from the subjects upon which they are centered.

In dementia these thoughts are absent. In melancholia they are concealed or persistently denied expression by the patient. The great difference, psychologically considered, between melancholia and dementia lies in the fact that the faculties are acute, but suppressed in melancholia, and blunted or obtunded, or partially destroyed in dementia, and the dulled state is the effect of absolute loss of the power of thought.

All cases of melancholia should be considered as suicidal in character, and therefore the first and most important consideration in their care and treatment is persistent and intense watchfulness. The patient should not be lost sight of for a moment lest an unexpected opportunity for self-destruction present itself and be taken advantage of. The suspicions of the care-takers are often lulled by an apparent improvement in the patient's condition, and the act consummated at the most unlooked for and unexpected time. No matter how cheerful the patient may seem, the impulse is always present, possibly cunningly concealed, but still as vigorous and irresistible as when in the stages of the deepest depression. The greater number of suicides occur at moments when the vigilance of the attendant has been relaxed because of the apparent absence of desire for the act on the part of the patient. The patient should never be left alone a moment, day or night, as long as the slightest evidence of disease is present. This surveillance should be unobtrusive and much tact is necessary at times to persuade the patient that she is not being watched, for it is highly important that the vigilance be of such a character as not to vex or irritate her.

Herein is presented a great opportunity for the display of tact and judgment on the part of both physician and nurse. The physician should treat the case as lightly, and be as cheerful in the presence of the patient as possible. It may be well enough at this time to call attention to the reprehensible custom relatives and friends often have of carrying on improper conversations in the patient's presence. They should be especially warned that the patient is unusually alert, and although apparently oblivious, or indifferent as to what is passing, they take acute cognizance of every word spoken in their hearing, and of every act both of physician and visitor. The power of observation is preternaturally acute in these cases, and even where there has been profound depression lasting for weeks or months, the memory has served the patient better than when in health. The senses are sharpened, rather than obtunded and therefore much more susceptible to the influences of mental impressions than during health.

The patient should be placed in the very best surroundings possible. A light, airy, well ventillated room with a cheerful outlook should be selected, and she should be free from all noises and excitement of any description whatever, and the *personel* as well as the number of her visitors should be carefully safeguarded. Especially should she be relieved of the visits of those persons who make her "nervous." The amount of company should also be greatly curtailed. The presence of much company, when patients are feeling this great mental distress, worries and necessarily increases the mental pain. As a rule, they are much better alone with a good attendant who has the tact to anticipate their proper wants, and to divert their minds from improper or unnecessary things they may want. One of the most frequent, and by all odds the most pernicious mistakes made in the treatment of melancholia, is made upon the assumption that the mind and spirits being depressed, the patient should be forced into society with the hope of diverting the mind from the miserable and unhappy channels in which it is travelling. Nothing could be more erroneous or more likely to injure the patient and interfere with the chances of recovery. The great and important indication, overshadowing all other means of relief, is rest. Absolute mental rest. And to obtain that, society must be shunned. Physical exertion often conduces to mental quietude, and it has been found that long tiresome walks, during which the patient has suffered physical exhaustion have often relieved the mental pain; but the mind must have a complete rest if we expect good results from treatment. When we have a broken bone or an inflammed joint to deal with, the indication for an immobile apparatus is clear. There is no question about it. And so it is with the condition present in melancholia. Opium is almost a specific for simple melancholia not dependent upon an organic lesion. The patient should be placed under its full influence and kept under it until recovery takes place; and it is astonishing how soon that frequently comes about. The dosage must be regulated by its effect upon the individual case. But, be it much or little, enough should be given to bring the patient completely under its influence. Sometimes it requires a very large amount of the drug to produce this effect. The administration should be carefully watched, and the dose regulated according to its effect. There seems to be no danger of the formation of the opium habit, for in the many cases reported, no case of the kind has occurred. This treatment to be effective must be continued until there has been a period of complete rest from mental pain and excitement sufficiently long to permit the mind to regain its natural tone and equilibrium. The action of the drug must be continuous. There must be no periods of time when its effects are allowed to wear off, and the pain to return. Spasmodic exhibitions of the drug are worse than useless, and are moreover dangerous, for thus a habit may be formed, and no good whatever be accomplished. As the splints are kept on the broken bone until it has entirely united, so this therapeutic splint should be kept applied until the mind has entirely recovered its normal condition. There is as a rule no trouble experienced in stopping the use of the drug at the proper time. The necessity for its use having passed, there is no longer a demand in the system for its continuance, and its withdrawal is not noticed by the patient. After the withdrawal of the opium treatment, the use of tonics may be resorted to for a time to build up the physical strength of the patient.

The bowels should be kept open by the use of saline waters, or the magnesia salts. Baths of various kinds are sometimes important adjuncts to the treatment, and should be associated with intelligent massage. The nature of the bath, its temperature, etc., should be governed by the pleasure it affords the patient, and the effect it has afterward. Sometimes a cold morning bath may exert a powerful effect in controling the disease, but in many cases the shock produced by that measure has a deleterious effect. Warm baths, on the other hand are sometimes decidedly enervating and are to be tabooed for that reason. So that reliance must be placed in the soothing influences of the bath, and the particular form must be selected which best suits the special case.

The return to society and the ordinary duties of life should be very cautiously inaugurated, and great care should be exercised in permitting indescriminate intercourse between the patient and general society, and the taking up of the responsibilities and cares of life, until fully assured that the stability of the mind has been restored definitely, and that there will be no danger of the excitement incident to this return to the usual routine upsetting again the mental equilibrium.

The question of home or hospital treatment becomes a most important one at the very outset of this disease. When it is possible to supply the patient with a good trained nurse, and the household arrangements are of such a character as to admit of the necessary seclusion and isolation, and the effect of the medicines can be frequently observed by the physician, home treatment may be successfully employed, but under ordinary conditions hospital care is much preferable.

The writer has had a varied experience in the home treatment of these cases, and has met with many difficulties in carrying out the treatment properly in the home. There is often great difficulty in having directions properly carried out, and especially is this true of the opium treatment. In several of these cases I have felt compelled to withdraw from the cases because of the impossibility of having the drug properly administered, and the unwillingness to assume the responsibility of its administration when it was apparent that no good could result and that much harm might. In the hospital, the trained nurse and the house physician are always present, and there can be no danger in pushing the opium treatment to its full limit. And to be effective it must be administered in that manner. If the attending physician has full and complete charge of the situation, and can be assured of having his directions carried out intelligently, and has the opportunity of seeing the patient frequently enough to guide him in the intelligent use of the drug, he can attain very satisfactory results from home treatment, but otherwise he can do the best for his patient if he recommends the care of the hospital as early as possible.

COMPOUND FRACTURES.*

BY M. F. HUSSEY, SIDNEY, OHIO.

In the careful perusal of the literature of compound fractures, a close reader will observe that the term has not the same uniformity of meaning throughout the civilized country. The application of the term in Germany and France differs from the application in this country. There is nothing in the significance or etymology of the word "compound" that would convey, in this application of it, an idea of the condition existing to any one not familiar with its use in a surgical sense. The word 'open" is a more preferable word. An open fracture would convey the meaning to any one not familiar with the technical nomenclature of the science of surgery. Besides all scientific nomenclature should have the same technical significance. Let the profession harmonize on the word "open" instead of "compound."

There is, perhaps, no other injury with which the general practician (or practitioner) has to deal that is so grave, so formidable and that requires more skill and in which good results depend so largely on his knowledge and its proper application as an open fracture. I know of no other condition in the domain of our science in which a thorough knowledge of immobilization and the application of experience has achieved such beneficial results.

The frightful mortality of open fractures during the pre-antiseptic period, the prolonged and suffering convalescence and, often the resulting deformity, made this one of the injuries that the best surgeons dreaded. But a moment's inspection of any pathological museum, reveals sequestra of bones and deformity that speak more plainly and potently of the great mortality than comparison of statistics. A few, however, will suffice to impress more indelibly what the older practicians had to contend with. Volkman stated that, in his and his predecessors' clinics, the mortality was forty per cent; in Guy's hospital the rate of mortality for twenty years was, in open fractures, thirty-one per cent.

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* Read before the Joint Meeting of the Miami and Shelby County Medical Societies at Troy, in June.

Despûs of France, treated thirteen cases of open fracture of the leg with a mortality of seventy-one per cent. In our own country the mortality is not much better. Of one hundred and fifty-eight cases treated in the New York hospital fifty per cent. died. The surgical history of the rebellion shows a fearful mortality. This, at the time, was a sad and mournful stain on our surgeons, many of whom were accused of negligence, indifference, ignorance and cruelty. Yet, when their environment and lack of knowledge of the causes of suppuration are considered, we can now say "they did well."

Let us turn from the sickening mortality of that period to one of modern surgery.

Of the first one hundred and thirty-five cases treated by Volkman two died, one of delirum tremens and the other of fat embolism. Bruns tabulate two hundred and fifty-four cases with a mortality of nine per cent. Mumford collected three hundred cases from the Massachusetts hospital with a mortality of ten per cent. What a humane consummation! How assiduously it was sought and how devoutly it is worshiped.

The improvement in the functional results has been equally as great with less suffering and loss of time.

The old antiphlogistic methods of cold applications, venesection, low diet, emetics, sedatives and cathartics, have given way to methods of rendering harmless the causation in the production of death. Why will not an open fracture unite as readily and with as good functional results as a subcutaneous one? We are not neophytes in the healing art and know too well the story, if we have kept apace with the progress of medicine.

The general practician, who understands the treatment of an open fracture, has a grave responsibilty; that of a sub-cutaneous one is difficult, but that of an open one far more so.

The difference lies wholly, or nearly so, in infection except where amputation is necessary.

If it be true that sepsis or infection makes the open fracture more dangerous to life and more difficult to treat, then the prevention of infection should be our *sine qua non* and its consummation removes the danger and difficulty and makes the open fracture as easy to handle as the sub-cutaneous ones.

The first duty then is the prevention of infection, or, if it be infected, to prevent its extension and absorption. To prevent infection is possible in all fractures of election, but those of accident are all, or nearly so, infected. A safe rule is to consider all accidental wounds infected. We must not believe or think that because a wound is infected that it cannot become more infected or that it can, with impunity, be handled with dirty hands and instruments as I have seen some fairly good physicians want to do. This should be a golden memory gem to us all.

Don't depend on your older text books on how to treat fractures. If you do, you will go astray.

How to disinfect a wound and what are the best disinfectants can be found in any recent text book. Bichloride is, perhaps, the best disinfectant, but not an ideal one for wounds. It is injurious to the cells and forms an insoluable albuminate of mercury. A two and one-half per cent. solution of carbolic acid is the favorite of many. Pure carbolic acid followed in three to five minutes with alcohol comes as nearly disinfecting a wound with a minimum of danger as anything. Drainage, irrigation with sterilized water and normal salt solution will suffice for most recent wounds.

Open fractures with a counter opening or multiple openings, have a much lower mortality than those with but a single opening. Why? Because better drainage. To drain and not close the wound, or not to drain and close the wound, that's the question: whether it's better to run the risk of sepsis, osteomyelitis, phlebitis, pyaemia, and fat embolism with all their dire results or drain and eliminate much, if not practically all the risk. If sure, if positive, if you know the wound is aseptic close it, otherwise drain, drain, drain.

No speceific rules can be given applicable to each case, but each is a law unto itself. If possible drain from the lowest part of the wound, not necessarily the lowest part of the surface wound, but that of the inner. Make counter openings and drain with gauze or preferably rubber tubes with many openings. Always drain where there is suspicion of sepsis; never drain where there is asepsis. Better err on side of safety. For how long continue drainage? That depends on the nature of the wound and its condition; treat the flesh wound for the first twenty-four, forty-eight, seventy-two or ninety-six hours. What harm can come to the bone fragments if they are not coapted for that time. Keep them at rest for that time and see how easily they are co-apted and held in position. By that time one can be quite certain of the wound's condition, pain will have subsided and spasms of the muscles ceased.

Treat your flesh wound as you would if it were not complicated with a fracture except possibly the attempt to avoid dead space. Don't be stingy in cleaning the cutaneous surface for many inches beyond the wound.

What shall we do with the bone fragments? The older books said "remove them." Why? Why not cut down and remove them in a subcutaneous comminuted fracture. Leave the attached ones in *situ;* the others clean, replace and attach and they will grow, if your wound is aseptic, as surely as a skin graft.

If too much bone surface is lost fill in with bone chips or use a plug made of the following as recommended by Professor Moorhof: Finely powdered iodoform sixty parts and forty parts each of spermaceti and sesame oil.

There are times when it will be necessary for direct fixation of the fragments. Many ingenious devices have been employed. The absorbable ones are preferable. When sutures are used, the lean kangaroo tendons or chromatized cat gut of twenty days' duration—by which time union will be sufficiently strong to hold the fragments together.

I think the time has come when more of the sub-cutaneous fractures should be treated by direct fixation.

There are many ways of immobilization. Plaster paris comes more nearly fulfilling all the requirements than any other. Billroth said, many years ago, that immobilization is the best antiphlogistic. That is true when sepin is eliminated.

An acquaintance with the anatomical functions of the muscles moving the injured bone, close observation and some mechanical skill constitute the essentials for the successful treatment of the fractured bone.

THE TRUNK OF THE SYMPATHETIC NERVE.
(NERVOUS TRUNCUS SYMPATHICUS.)

BYRON ROBINSON, CHICAGO.

The trunk of the vaso-motor (sympathetic) nerve has experienced a variety of names:

SYNONYMS: The lateral cords of the sympathetic; the principal cords of the sympathetic; the lateral ganglionic chain of the sympathetic; the nodular cords of the sympathetic.

GERMAN: Grenzstrang, Hauptstrang, Knotenstrang.

The nerve strands connecting the ganglia of the sympathetic trunk are termed commissural cords. The trunk of the sympathetic nerve presents the *form* of an elongated elipse enclosing the vertebral column, united at the proximal and distal ends by unpaired ganglia. The trunk consists of a vertical, symmetrical, bilateral ganglionated cord with indefinite union at the proximal end (ganglion of ribes) and distal ends (Ganglion Coccygeum). The number of ganglia and roots correspond in general to the number of spinal nerves. Exceptions occur in which the ganglia coalesce, as in the reduction of the seven cervical to the usual number of three. The total number of trunk ganglia (3, cervical), (11, dorsal), (4, lumbar) and (4, sacral) vary from 20 to 25. The form of the trunk ganglia varies and may be elongated, olive, spindle, triangle, pyramidal, irregular shaped. The ganglia in general are *located* ventral to the transverse processes and on the lateral surfaces of the vertebræ. However, the relation of the ganglia in each segment to the vertebra varies. The trunk ganglia vary in *dimension* from ¾ of an inch long (inferior cervical ganglion) to less than the size of a grain of wheat. The terminations, both proximally and distally, of the elongated elliptical ganglionated trunk are obscurely united by ganglia or commissural cords.

A ganglion is composed of a larger or smaller number of multipolar nerve cells enclosed in a capsule of connective tissue.

RAMI COMMUNICANTES.

The bilateral symmetrical vertical ganglionated trunk of the sympathetic is connected to the spinal cord by means of the rami communicantes, which are two bands of nerves extending from the spinal nerves to the ganglia of the trunk of the sympathetic. These central communicating branches are known as gray (sympathetic) and white (visceral) rami communicantes. The ganglionated trunk of the sympathetic nerve emits important visceral branches from its different segments (cervical, dorsal, lumbar and sacral) to the viscera of the thoracic, abdominal and pelvic cavities. The following table will present a bird's eye view of the segments of the trunk of the sympathetic nerve with their important branches.

SUPERIOR MEDIAN GANGLION (RIBES).

(Ganglion Superior Medius).

I. Trunk of the cervical sympathetic (Truncus Sympathicus Cervicales). Two to three.	1. Superior cervical ganglion (ganglion cervicale superior). 2. Middle cervical ganglion (ganglion cervicale medium). 3. Inferior cervical ganglion (ganglion cervicale inferior).
II. Trunk of the dorsal sympathetic. (Truncus Sympathicus Dorsalis.)	Ten to twelve. Emits splanchnic nerves. (Coeliac Plexus.)
III. Trunk of the lumbar sympathetic.	Four to five.
(Truncus Sympathicus Lumbalis.)	Emits lumbar branches to plexus aorticus.
IV. Trunk of the pelvic sympathetic.	Four to five.
(Truncus Sympathicus Pelvinus.)	Emits visceral nerves.

Inferior medial ganglion (ganglion coccygeum).

I. Branches of the Cervical Trunk of the Sympathetic.

The cervical sympathetic trunk is a projection proximalward (toward the cranium), along the great cervical vessels.

The branches of the three cervical ganglia and commissural cord and distributed to structures of the head, neck and thorax and consist of:

(a) Motor fibres to involuntary muscles (pupil dilators).
(b) Vaso-motor fibres to head, neck and proximal limbs.
(c) Pilo-motor fibres along cervical spinal nerves.
(d) Cardiomotor fibres.
(e) Secretory fibres.

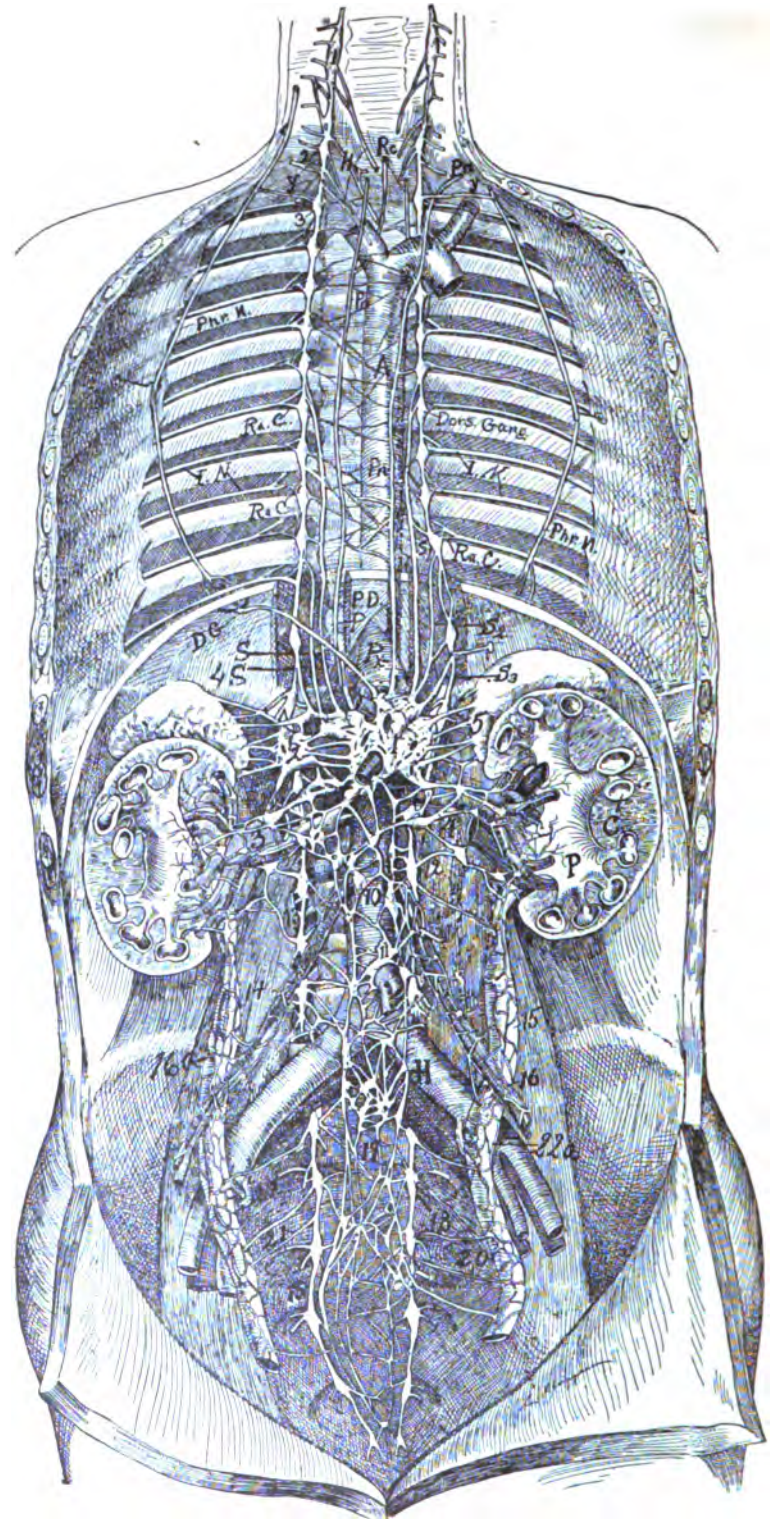

ILLUSTRATION OF THE SYMPATHETIC TRUNK.

A General View of the Trunk of the Sympathetic. In the Center of the Elliptical Shaped Trunk or Bileteral Ganglionic Chain is Located the Abdominal Brain.

The trunk cervical ganglia are located on the prevertebral muscles dorsal to the carotid artery. It extends from the first rib to the base of the skull.

The cervical sympathetic trunk is characterized by the absence of the white rami communicantes. The cervical ganglia, usually coalesced, from seven to three in number, are important on account of the emitting of the pharyngeal plexus and cardiac nerves.

A. Superior Cervical Ganglion.

(Ganglion Cervicale Superius).

SYNONYMS: Supreme cervical ganglion (ganglion cervicale supremum); the great cervical ganglion (ganglion cervicale magnum); the fusiform cervical ganglion (ganglion cervicale fusiforme); the olive-shaped cervical ganglion (ganglion cervicale olive).

The superior cervical ganglion, ¾ of an inch in length is the largest of the sympathetic trunk ganglia. It is located at the base of the skull between the internal jugular vein and internal carotid artery. It is irregular in form, however, chiefly spindle-shaped. The commissural cord connects it to the middle cervical ganglion.

The main branches of the superior cervical ganglion are:

Central communicating branches	1. Gray rami communicantes (no white). 2. Communicates with cranial nerves.
Peripheral branches of distribution.	3. Emits branches to pharynx. 4. Emits superior cervical cardiac nerves. 5. Branches to vessels (controlling lumen).

B. Middle Cervical Ganglion.

(Ganglion Cervicale Medium).

SYNONYMS: The thyroid ganglia (Ganglion Thyroideum).

The middle cervical ganglion sends branches:

1. (*Central Communicating Branches*) Grey rami communicantes (no white).

2. The subclavian loop (Ansa Vieusseni, French anatomist, 1641-1716) enclosing the subclavian artery and joining the middle and inferior cervical ganglia.

3. *Peripheral branches of distribution,* the middle cervical cardiac nerve.

4. Branches to the thyroid body.

C. *Inferior Cervical Ganglion.*

(Ganglion Cervicale Inferius).

SYNONYMS: The first thoracic ganglion (Ganglion Thoracicum primum): the vertebral ganglion (Ganglion Vertebrale); the stellate ganglion (Ganglion Stellatum).

The inferior cervical ganglion is irregular in dimension, form, location and branches. The inferios cervical nerve emits:

1. (*Central Communicating Branches*) grey rami communicantes (no white).
2. Subclavian loop.
3. Communications with larynx.
4. (Peripheral branches of distribution). The inferior cervical cardiac nerve.
5. Branches to vessels.... { (a) Vertebral plexus. (b) Subclavian plexus.

The bilateral trunks of the cervical sympathetic are not directly united by transverse nerve strands.

II. Branches of the thoracic or dorsal trunk of the Sympathetic.

The dorsal or thoracic ganglia composing the dorsal or thoracic trunk of the sympathetic generally consists of eleven ganglia of varied form and dimension connected by commissural cords of marked dimension. The important feature of the thoracic sympathetic trunk is that the distal five or six ganglia give origin to the three splanchnic or visceral nerves which richly supply the abdominal viscera. The branches forming the ganglionated thoracic cord may be divided into two kinds (a) central branches connecting with other nerves; (b) peripheral branches distributed in a plexiform manner to the thoracic and abdominal viscera. The significant feature of the thoracic trunk of the sympathetic is the presence of the white rami communicantes (visceral nerves). The central communicating branches are (both) the white and grey rami communicantes. The peripheral branches of distribution of the thoracic trunk arise both from the ganglia and the commissural cord. The important distributing branches in the practice of medicine for the abdominal viscera are the three splanchnic nerves, the distal ends of the splanchnic nerves practically form the abdominal brain—the visceral ruler of the peritoneal organs.

The splanchnic nerves are the abdominal visceral nerves. The following table presents a bird's eye view of the branches of the thoracic sympathetic trunk:

Branches of the thoracic sympathetic trunk.

1. (*Central communicating branches*) white rami communicantes.
2. Gray rami communicantes.
3. (*Peripheral branches of distribution*).
   Pulmonary (from II, III and IV ganglia) to form the pulmonary plexus.
4. Aortic (from proximal 5 ganglia) to supply aorta.
5. The three splanchnic nerves (from the distal 7 thoracic ganglia and commissural cords) to supply the abdominal viscera.

A. *The Great Splanchnic Nerve.*

(Nervus Splanchnicus Major).

arises from the thoracic trunk between the fifth and ninth ganglia. By the coalescence of several irregular strands a nerve of marked dimension is formed which passes distalward in the dorsal mediastinum and perforating the crus of the diaphram terminates as the principal mass of the abdominal brain (semilunar ganglion.) The great splanchnic ganglion (ganglion splanchnicum maxium) is found on the trunk of the great splanchnic nerve within the thoracic cavity.

B. *The Small Splanchnic Nerve.*

(Nervous Splanchnicus Minor.)

The small splanchnic nerve arises from the trunk of the thoracic sympathetic in the region of the ninth and tenth ganglia. It courses adjacent to the bodies of the distal thoracic vertebræ, perforates the crus of the diaphram adjacent to or with the great splanchnic and terminates irregularly in the abdominal brain, (and occasionally in the so-called aortic-renal ganglion.)

C. *The Least Splanchnic Nerve.*

(Nervous Splanchnicus Minimus (inferior or tertius.)

The least splanchnic nerve arises from the last thoracic ganglion in the sympathetic trunk (or from the small splanchnic.) It perforates the diaphram and terminates in the plexus renalis. The bilateral thoracic trunks of the sympathetic are not directly united by the transverse nerve strands similar to the lumber and sacral trunks.

III. *Branches of the Lumbar Sympathetic Trunk.*

The lumbar trunk of the sympathetic consists usually of four ganglia joined by commissural cords. It is continuous proximally with the thoracic and distally with the sacral trunk of the sympathetic. The lumbar trunk is located on the bodies of the lumbar vertebræ internal to the origin of the psoas muscle and ventral to the lumbar vessels. The lumbar ganglia are not always bilaterally symmetrical in dimension, location, distance from each other and form. The ganglia are larger than those of the dorsal or sacral trunk. The commissural sords of the lumbar sympathetic trunk are longer, stronger and more irregular in number than the dorsal or sacral. The branches from the lumbar gangliated trunk consist of two sets, viz:

A. *Central Communicating Branches.*

1. The first two or three lumbar spinal nerves possess visceral branches which form *white rami communicantes* joining the proximal lumbar ganglia or commissural cord.

These white rami communicantes comprise vaso-motor fibres for the tractus genitalis and motor fibres for the uterus and bladder.

2. Gray Rami Communicantes which pass to the ventral primary divisions of the lumbar nerves. The rami communicantes (white and gray) are irregular in length, dimension and location.

B. *Peripheral Branches of Distribution* from the lumbar ganglia and commissural cord arise and pass to the plexus aorticus and aorta. The lumbar sympathetic trunk sends branches to the plexus ureteris. The branches are irregular in length, dimension, number and location. The bilateral sympathetic trunk is directly united by several transverse nerve strands, chiefly extending from ganglion on one side to that on the other.

IV. *Branches of Sacral Sympathetic Trunk.*

The sacral trunk of the sympathetic is a continuation of the lumbar trunk. It terminates in a plexiform coalescence over the coccyx with the trunk of the opposite side. The distal termination of the sacral sympathetic trunks are known as the ganglion impar or coccygeal ganglion. There are usually four ganglia which united by a commissural cord decrease in dimension from sacral promontory to coccyx. The ganglia are generally not bilaterally symmetrical in location, dimension or equidistant from each other. The usual location is on the ventral surface of the sacrum on the internal border of the sacral foramina. The ganglia scralia vary in number, dimension, location and form. The bilateral sacral sympathetic trunks are united directly by numerous transverse nerve cords which are arranged in a plexiform manner (which I have termed plexus intertrunci sacralis.) The middle sacral trunk of the sympathetis, like that of the cervical and distal lumbar receives no white rami communicantes from the spinal nerves.

The visceral branches (Pelvic Splanchnic) of the II, III and IV sacral nerves join the pelvic plexus (pelvic brain) without being directly connected with the sacral sympathetic trunk. These nerves, however, are to be considered homologous with the white rami communicantes of the thoracic and lumbar (abdominal splanchnics.)

The II, III and IV sacral nerves transmit to the tractus genitalis (uterus) tractus intestinalis (rectum) and tractus urinarius (bladder) motor and inhibitory nerves, and also vaso-dilator fibres for the tractus genitalis.

The branches of the sacral sympathetic trunk are of two kinds, viz:

A. *Central Communicating Branches.*

I. Gray rami communicantes arise from the ganglia and join the ventral primary division of the sacral and coccygeal nerves. There are no white rami communicantes.

B. *Peripheral Branches of Distribution* are

1. Visceral branches of limited dimension which arise mainly from the proximal ganglia of the trunk and commissural cord and pass medianward to join the interiliac plexus and pelvic brain as well as the three kinds of pelvic viscera and adjacent vessels.

2. Parietal branches limited in dimension which ramify on the ventral surface of the sacrum, especially in relation with the sacral artery, forming what I have termed the plexus intertrunci sacralis.

The four segments of the trunk of the sympathetic nerve, cervical, dorsal, lumbar and sacral, differ according to location and environment.

The white rami communicantes (visceral nerves abdominal splanchnics) stream from the dorsal and proximal lumbar ganglia.

The visceral nerves of the pelvic sympathetic trunk (pelvic splanchnics) do not pass through the sacral ganglia but through the II, III and IV sacral nerves.

The distributing branches of the pelvic sympathetic trunk are the least important of any segmental trunk. The bilateral cervical and dorsal sympathetic trunks are practically not directly united by transverse nerve cords, the bilateral lumbar and pelvic trunks are united by numerous transverse nerve cords (and plexuses.)

The bilateral cervical sympathetic trunks are united by two localized prevertebral plexuses, the pharyngeal and cardiac.

The bilateral dorsal sympathetic trunks are united by a single prevertebral collosal pelvus—abdominal brain.

Ganglionic coalescence occurs chiefly in the cervical trunk. The ganglia are the most irregular in the pelvic trunk, the largest in the cervical and lumbar trunks.

The commissural cords are multiple supernumerary in the lumbra and sacral trunks only.

The cervical sympathetic trunk is the only segment so far subject to surgical intervention (extirpation.)

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

At the next meeting of this association, to be held at Indianapolis, Ind., October 10, 11, 12, the annual addresses will be delivered by Dr. Arthur R. Edwards, of Chicago, and Dr. W. D. Haggard, of Nashville, Tenn.

Dr. Edwards has chosen for the subject of his address, "Certain Phases of Uremia, Their Diagnosis and Treatment," and Dr. Haggard will discuss in his address, "The Present Status of Surgery of the Stomach." In addition to these addresses there will be the annual address of the president, Dr. Bransford Lewis, of St. Louis.

A cordial invitation is extended to every physician in the valley to attend this meeting, for which a large number of interesting and valuable papers have been promised. Special rates, on certificate plan on all railroads. The Big Four Route has been designated the official route, and will accord delegates special service. Ask any agent for special rates.

INFLAMMATION.

JAMES U. BARNHILL, PH. D., M. D.,

Professor of the Principles of Surgery and Clinical Surgery, Ohio Medical University; Surgeon to the Protestant Hospital, Columbus, Ohio.

II. NATURE—ETIOLOGY.

As inflammation is one of the most tangible of morbid processes it is but natural that there should be many efforts to explain its phenomena. Various theories have been advanced, especially in reference to its nature and causation. Many of these have only an historic interest, while others, representing the nearest approach of science to exact truth, are entertained, with varying degrees of qualification, by pathologists of the present, and made the basis of the surgical treatment of injuries and morbid processes. Neither the laboratory nor experience has furnished a satisfactory explanation of all the phases of the complex inflammatory process.

In the golden age of Alexandrian medicine inflammation was attributed to the iatromechanical principle of friction between moving and stagnant fluids of the body. Erasistratus ascribed it to plethora and aberration of humors (*error loci*) in the smaller arteries. "Inflammation," he said, "arises when the blood is detained in the smaller vessels by the pneuma driven from the heart into the arteries." With Stahl, plethora and stagnation in the circulation were the main causes of inflammation. Hoffman taught that it depended upon spasmodic arrest of the circulation; Reil, that excessive irritability, causing aberration of form and composition in blood vessels, was the causative factor. According to the Brunonian theory excitability and irritation in tissues and blood vessels produce this morbid process. It will be seen that these early theories imply that vascular disturbances are associated in a causal relation with inflammation. By many of the ancients inflammation was regarded as an entity.

The modern conceptions have been largely shaped by the cellular and attraction theory of Virchow, according to which irritants of various kinds excite proliferative changes in the tissues, thus inviting more blood to the part and greater cellular activity. Conheim held that the essential feature of inflammation was the degenerative changes in the endothelium and emigration of leucocytes from the blood vessels. The experimentations of Dudrochet and Waller had laid the foundation for this emigration theory. With Virchow the initial step in the process is the formative stimulation of tissue cells, while with Conheim it was degeneration of the vessels leading to emigration. Weigert maintained that in many cases the first step is necrosis of parenchymatous cells.

Inflammation is now very generally regarded as purely reactive in nature, a reaction to injurious agents, the irritation causing a great variety of lesions and morbid processes. This view is sustained in most of the definitions given in our first article. There is difference of opinion, however, as to the character of this reaction, and also in relation to the nature of irritants capable of producing it. Two views are entertained in reference to causation: one is that there are a variety of irritants capable of inducing inflammation, and the other that it is always the result of infection —of micro-organisms and their toxins. Most pathologists hold the former view, that it may be induced by a variety of causes, as heat, toxins, chemical irritants and traumatism. Thus Stengel says that irritation by mechanical, thermal or infectious agents causes inflammation when it is severe enough to disturb the vitality of the tissue and not sufficient to cause excessive necrosis.

Clinicians are divided in their opinion and teaching. Those who hold that inflammation may be caused by various irritants, usually, however, divide inflammations into the simple and infective, and speak of that due to micro-organisms as true inflammation. The first variety is mild and not progressive. Its histology includes, in addition to congestion, hyperemia, exudation and other processes, producing certain organic alterations in the tissues. Senn, Nancrede and others maintain that inflammation is always the result of micro-organisms and the toxic substances evolved by them. They contend that it is a destructive, microbic interference with the normal process of repair in living tissue, and that repair can only go on when inflammation subsides. Their opponents, committed to the proposition that inflammation is not always due to microbes, usually maintain that it is not necessarily a destructive process, but that it may be conservative and reparative. The latter confuse mass regeneration or tissue repair with inflammation. Some of them, with Adami, assert that the "inflammatory process is the first step in repair;" yet, fortunately, these same authors, despite their theory, admonish us, in treating injuries, to "antagonize inflammation." If it be the first step in the healing process why should we combat it? Their answer, doubtless, would be, it should be kept within bounds, its intense or exaggerated phases only are to be combatted.

All who divide inflammation into the simple and infective are not committed, however, to the above view of its reparative power; for many, with Warner, hold that "the changes produced by inflammation are, on the contrary, those expressive of destruction rather than repair." Confusion arises here, no doubt, partly, as already pointed out, by regarding repair as an inflammatory process and partly from the extreme complexity of inflammatory changes.

Repair and inflammation are two distinct processes. Both are due to what Virchow called the formative power of tissue cells; in the one case this inherent embyonic power reproducing lost tissue to the extent of perfecting the injured organism, in the other the same indwelling power, aroused by an unusual irritation, producing leucocytosis and adventitious tissue to protect the organism against further injury.

Portions of a divided hydra reproduce lost tissue until each is a perfect organism without evidence of inflammatory changes. In the higher organisms more disturbance is occasioned, some hyperemia and exudation seen, but the power that heals the wound—that effects mass regeneration—is the same as the embyonic force that induces cytogenesis after normal tissue waste. If a sense of want and the presence of the detritus of the dying cell in normal waste is the occasion of the karyokinesis of the adjacent cell, may we not believe that the detritus of injured cells in a wound is the occasion or exciting cause of the chemotaxis and cell proliferation that restores the organism to perfection. In both cases the sense of loss from damaged and absent cells is but the occasion of a recrudescence on the part of the injured cells to more embyonic types and greater proliferative activity. The possible hyperemia and exudation accompanying healing by first intention are quite different from inflammation, albeit the latter process includes both hyperemia and exudation; but it embraces much more. With inflammation we always have stasis and and disordered function in a degree which readily distinguishes it clinically from healing per priman. Primary healing is *regeneration ad integram,* normal histologic restoration of lost tissue, biologic peace, essentially physiologic, while inflammation is proliferation for defense and essentially pathologic. It would seem, therefore, that this distinction should be maintained by restricting the term inflammation to pathologic conditions and applying the term repair or mass regeneration to the histologic changes of aspetic healing.

The power of repair is inherent in the tissue, and is not excited or called out by inflammation but rather repressed by it. It is most active when there is no inflammation, or for those who think there is some inflammation in all wounds, we would say that this power is most active in the absence of inflammatory phenomena and in all cases it is in inverse ratio to the intensity of the inflammation. The surgically clean wound is most readily repaired. Here we have no source of irritation and no appreciable amount of vasular disturbance. The less irritation the more active is repair. This demonstrates, if demonstration be needed that irritation plays no part in promoting the healing process. In the presence of inflammation the healing process is, in a measure, interferred with, and yet this inflammation is, within certain limits, beneficial, the benefit conferred being the protection of the organism against injurious agencies and not in any sense an aid to the healing process per se. Inflammation is essentially cellular war, and like war in the state it is destructive. In the presence of an enemy war may be better than peace for the protection of country, so in the presence of infection or other injurious agents inflammation may serve a useful purpose. In time of peace, social functions, organization and growth go on more actively than in war; so in the biologic organism, physiologic functions, including regeneration, are best performed in the absence of inflammatory conditions.

Thus it is seen that inflammation is not the first step in repair, nor any step, nor any factor in repair. The hypremia and emigration of cells and other histologic changes are results of the chemotaxis from the injury. These are regenerative activities in time of cellular peace. Inflammation is an offensive battle against an invading foe.

Using Virchow's simile that inflammation is a war of cells we may picture in the conflict citizen phagocytes becoming soldier polemizocytes (war waging cells) and phagocytic activity being supplymented by polemizocytosis, in which the enemies fight with poisoned weapons, inflicting injuries on structures in remote parts of the organism. Out of the elements of this warfare and in spite of the destructive inflammatory process the reparative power of the underlying tissues, by an early effort, as it were, at reconstruction, form superfluous tissue and adhesions which are sometimes beneficial and sometime injurious.

On the question of unity of causation we are not prepared to follow the head of its able advocates. For the present we prefer to accept the teaching of leading pathologists that inflammation may result from other causes than infection admitting at the same time that the types thus produced are clinically of little importance. All concede that bacteria and their toxins are by far the most frequent cause, and that clinically microbic infection furnishes an explanation of the great majority of inflammatory processes met with by the surgeon.

Friction and the action of heat and chemicals are cited as illustrations of inflammation induced by other causes than infection. The irritant in this instance causes death of tissue and resulting poisons which of themselves will cause hyperemia and furnish suitable soil for infection; and as such wounds are almost always exposed to the air and are on parts not surgically clean germs soon induce true inflammation. Injuries from certain chemicals such as croton oil, turpentine and mercury seem to induce inflammatory action, even suppurative inflammation. Councilman induced suppurative inflammation by the introduction of turpentine and croton oil, inclosed in aseptic capsules, into the connective tissue. After the wounds had healed he found, upon opening the space into which the drug had been injected, that there was circumscribed inflammation and suppuration. Other similar experiments have been performed with the same result. Orthmann, in experiments with croton oil, turpentine and metalic mercury, found that he could uniformly produce inflammation and suppuration. Grawitz found that he could, by the use of aseptic turpentine in sufficient quantities, always cause suppurative inflammation in the connective tissue" "Inoculations of different nutrient media with pus produced by turpentine showed that it contained no microorganisms." In commenting on inflammation induced by these agencies, Dr. Senn says, "Taking it for granted that certain chemical pyogenic substances, when injected in sufficient quantities into the tssues of animals, have the power to produce suppuration, inflammation and suppuration produced in such a manner do not represent clinically suppurative affections. Neither the inflammation not the suppuration following such experiments are progressive in the character. The chemical substances produce inflammation over an area which corresponds with the extent of its diffusion, and the cellular elements of the inflammatory product are converted into pus-corpuscles by the destructive action of the substance on their protoplasm. The whole course of the artificial affection remains aseptic throughout, not clinical, but chemical, pus. In suppuration, as we see it at the bedside, the direct cause which produced it multiplies in the tissues; hence its tendency to become progressive. Practically, in man, the occurrence of suppurative inflammation from the action of such substances would be possible only on the surface of the body."

While the great majority of investigators maintain that inflammation and even suppuration can be produced by injecting chemical substances into the tissues or by the action of heat and cold, they are all agreed that the types of inflammation, met with by the surgeon, are in a large measure due to microorganisms and their toxins. So that clinically we may regard infection as the cause of all true inflammation.

Much of the confusion as to the nature and cause of inflammation arises from differences of opinion as to what should be included under the head of inflammation. Hyperemia, suppuration, necrosis and degeneration should be treated of as distinct processes. But they may all be present in a given case of inflammation in varying degrees of intensity. The varying character of the tissues involved and the irritant applied make inflammation an inconstant process without uniform characteristics.

The so-called aseptic inflammation is simply hyperemia with exudation. The manner of termination of such inflammations is entirely different from the true inflammations. They terminate usually by resolution or the formation of cicatricial tissue without progressive morbid processes. The swelling following the sting of a bee is an illustration of the large amount of exudate that may be occasioned by the introduction of a toxin, but if germs have not been introduced at the same time the swelling soon subsides with very few of the usual phenomena of inflammation.

Clinically we may regard as the exciting causes of inflammation—the true inflammation of the old authors—the pathogenic organisms and their products. There are, however, many predisposing causes, all of which affect nutrition, such as climate, many diseased conditions and the action of other bacteria. One variety of germs may produce substances which either enhance the virulence of action of another species, or so alter the cell-resistance or metabolism that the true pathogenic organisms can usurp full sway over the tissues. Thus the bacillus prodigiosus increases the effect of the toxins produced by the streptococcus of erysipelas. Sudden changes of temperature or exhaustion from fatigue or abstinence from food will often so lower the vitality that microrganisms may more readily induce inflammatory processes.

Some hold that inflammation may arise from endogenous causes. They regard the product of cell degeneration following deprivation of circulation and of abnormal metabolism, as in gout, as causative factors in the production of inflammation. These may better be classed as predisposing causes, among which should be included all those which lower vitality, impair vigor, or impoverish the blood or otherwise create favorable conditions for the development of microorganisms. The metastatic inflammations are now known to be due to infection. While it was once believed that the nerves played an important role in the causation of inflammations it is now known that it is only a predisposing influence through atrophic changes which lower vitality in remote parts and subject them more readily to invasion of phlogogenic irritants.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting September 4, 1905.

F. F. Lawrence, President. Chas. J. Shepard, Secretary.

Members present, 38. Dr. J. F. Jones reported a case and presented a specimen of a doubled headed monstrosity.

Dr. J. M. Dunham read a paper on "Pregnancy and Complications;" and Dr. T. W. Rankin one on "Some Obsterical Experiences." Discussion by Drs. Wilson, Beery, Upham, Clemmer and Baldwin.

Regular Meeting, September 18, 1905.

Members present, 44. Pathological specimens of two hearts, one weighing 32½ oz., and the other 4 oz., presented by Dr. Loving. Dr. S. J. Goodman reported a case of circumcision with gangrene following injection of cocain and adrenalin solutions.

Dr. I. B. Harris read a paper on "The Diagnosis of Valvular Diseases of the Heart." Discussion by Drs. Waters, Cooperrider and Winders.

The Columbus Academy of Medicine will not hold its regular meeting on October 16th, but will hold a special meeting on Saturday evening, October 14th, at the Neil House. Dr. Frank Billings, of Chicago, will address the Academy on "Diseases of the Stomach from the View-point of a Physician"; Dr. J. B. Murphy, also of Chicago, will present a paper on "The Surgical Treatment of Non-Malignant Diseases of the Stomach."

WANTED—Ohio Medical and Surgical Recorder, Vols. I (1847-8) II, IV, IX; Nos. 4 and 5 of X; No. 6 of XI; No. 1 of XII; Nos 1 and 2 of XIII; No. 6 of XIV; Nos. 4 and 6 of XV; Nos. 1 and 2 of XVI. Same Journal (New series), Vol. I (1876) Nos. 2, 3, 4, 5 and 6 of II; Nos. 1 and 6 of III.

THE COLUMBUS MEDICAL JOURNAL.

A MONTHLY MAGAZINE OF MEDICINE AND SURGERY.

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OCTOBER, 1905.

Editorial.

THE NEW ERA OF MEDICAL TEACHING.

The last two years have witnessed many improvements in medical teaching, and with them great advance in the science of medicine. Notwithstanding these evident improvements there is a feeling that there should yet be radical changes in our methods, and especially in reference to improvements in the first years of the course, and the separation of the purely scientific and clinical parts of the course. We are just coming to realize in this country as the profession is in Europe the great importance of clinical instruction. As clinical instruction constitutes the best part of the course, a relatively larger amount of it should be given in the hospitals. On the other hand we are coming more to appreciate the fact that the preliminary studies ot the first two years can best be given in connection with literary college work.

The University of London inaugurated, with the opening of the medical schools for the current year, what promises to be a new era of teaching which "will have as its chief characteristic an endeavor to place the study of medicine upon a basis more truly scientific than that upon which it has hitherto rested, and to restrain the element of empiricism, using the word in its proper sense, within the narrowest limits which circumstances will allow." In this University arrangements have been made "for the conduct of the preliminary anatomical, scientific, and laboratory teaching of students whose subsequent clinical education will be conducted elsewhere; and will in this way be enabled, as time goes on, to furnish the metropolitan hospitals with a constant supply of men well grounded in anatomy and pyhsiology, and prepared, by a preliminary study of the methods and results of physical science, to take part in the observation and investigation of vital actions and phenomena, and of the manner in which these actions and phenomena may be modified by what we call disease." Among the considerations which have led to this change has been the fact, as well stated editorially in *The Hospital,* that "the work of teaching, in too many instances, has been regarded mainly as a condition of preferment; and, in these circumstances, it can hardly have failed to lose something of the earnestness and force which would have been infused into it by a professor to whom it would represent the primary duty of his life, and the chief end to which his energies should be directed." The defects here pointed out are, of course, more evident in schools farther removed from the great centers of learning. The example set in the University of London will doubtless have a marked influence on teaching elsewhere. "Medicine is essentially the study of the relations between man and his environment, and of the methods in which those relations may be modified either by nature or by art. A large proportion of what we call diseases are only the symptomatic expressions of perversions of the chemical processes of metabolism, and can neither be undertsood nor rationally treated by practitioners to whom organic chemistry is either a sealed book, or even a verbal collection of the hypotheses of two or three years ago. Another enormous proportion are only the symptomatic expressions of struggles for survival between man and inferior organisms, and require for their due comprehension. and proper treatment, a knowledge of biology of a far more accurate and comprehensive kind than is generally either possessed, or even recognized to be necessary."

COLUMBUS STATE HOSPITAL.

We are in receipt of the sixty-sixth annual report of the trustees of the Columbus State Hospital. The institution, says this report, has been quite successful during the past year.

The average daily population for the year has been 1,437 patients; 773 were males and 664 were females.

The cost of maintenance for the year has been $145.74 per capita, and including expenditures from all appropriations, excepting repairs and improvements and permanent improvements, $147.27 being somewhat in excess of the per capita rate of the preceeding year, but taking into account the increased price of many articles entering into the consumption, we regard this as low a rate as possibly could have been obtained, having regard to the comfort and welfare of the patients. The current expenses for the year ending November 15, 1904, were $200,863.35; officers' salaries, $8,567.22; making a total drawn from the state treasury of $209,430.77.

No changes have been made in the medical staff of the institution which consists of the following: George Stockton, M. D., Columbus, Superintendent; George T. Harding, Jr., M. D., Marion, Assistant Physician; Earle E. Gaver, M. D., McCuneville, Assistant Physician; Guy H. Williams, M. D., Richmond, Assistant Physician; William W. Richardson, M. D., Washington, D. C., Assistant Physician; Isabell A. Bradley, M. D., Akron, Pathologist; Angus MacIvor, M. D., Columbus, Assistant Physician.

The superintendent, Dr. Stockton, under the head of the medical administration, reports admissions for the year, 341 men, 222 women. Total number under treatment during the year 1,126 men, 897 women. Discharged as recovered 56 men, 45 women. Discharged as improved 50 men, 31 women. Discharged as stationary or unimproved 96 men, 74 women. Died, 88 men, 42 women. Not insane, one man, no women. Number of discharges 291 men, 192 women. Percentage of recoveries based on admissions, 16.42 for men, and 20.27 for women. Table number one shows that 50 men and 50 women were received from county infirmaries and other state hospitals, and figuring upon the number of admissions, exclusive of these chronic cases, the percentage of recoveries is for the men 19.24, and for women 26.16. Percentage of death based on total number under treatment, 7.81 men, 4.67 women. Actually in the hospital at the close of the year, 797 men and 681 women. Daily average of those actually in the hospital, 773 men and 664 women.

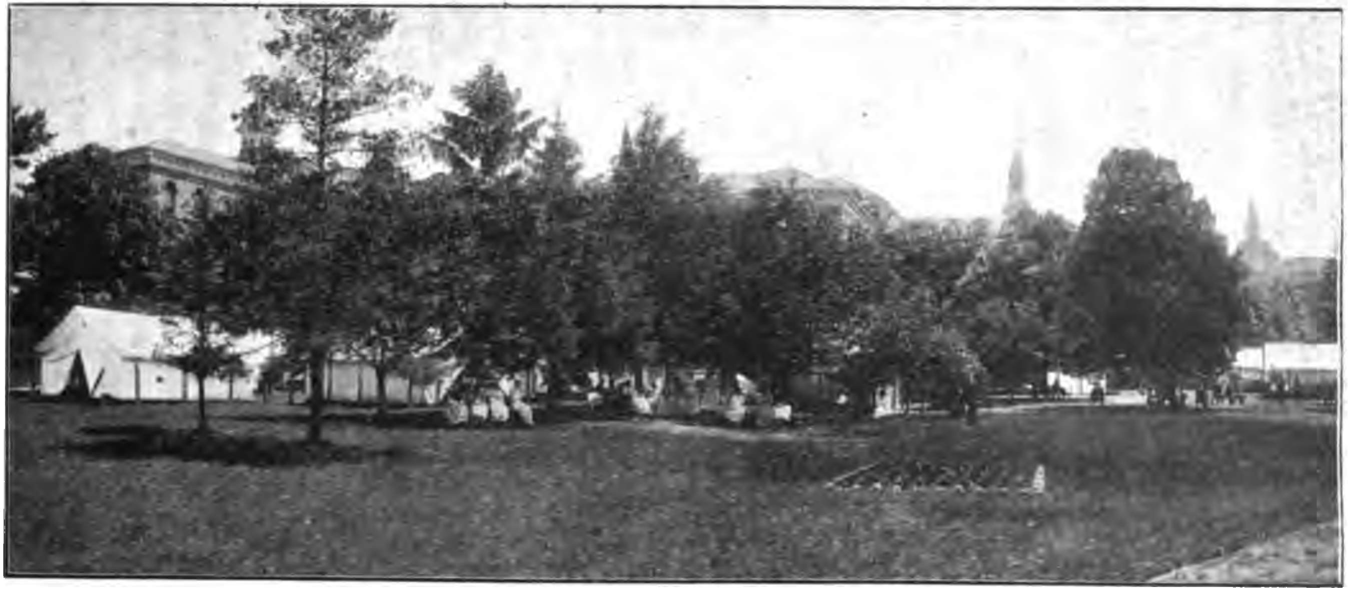
COLUMBUS STATE HOSPITAL TRAINING SCHOOL NURSES.

From the above report we learn that as far back as 1887, the late Dr. C. M. Finch, who was then superintendent of this hospital, and a man in advance of his time, saw the benefit to be derived from these lectures. During the two succeeding administrations this work was dropped, but under the late Dr. A. B. Richardson it was revived, then during the administration of Dr. E. G. Carpenter the work was broadened, and the instruction systematized.

It is evident that the training school secures for the institution better service in the way of nursing, while it also qualifies a class of nurses for special nursing in caring for the insane. As stated by the superintendent, those whose knowledge of the nature of mental diseases, and of the tendencies of the insane is increased by systematic instruction, become more observing, more thoughtful, more companionable, and more just toward their patients, and altogether render much more satisfactory service.

TUBERCULAR TENT COLONY AT STATE HOSPITAL.

During the year 1903, twenty-four tubercular insane patients were treated at Columbus State hospital in open air colony with, as stated by the superintendent, in his annual report, most gratifying results. In the following year eighty-four patients were treated, and during last summer ninety-six were treated, of whom fifty-nine were women and thirty-seven men. Of these ninety-six cases, fourteen were admitted in the third stage of the disease, twenty-nine in the second stage, and fifty-three in the first stage. There were five deaths in the camp during the summer, all of which were patients admitted during the last stage of the disease. Two of the cases who died were complicated, one by cancer of the breast, the other by arterio sclerosis of old age. Of the remaining nine cases admitted in the third or last stage, seven did not show any



TUBERCULAR TENT COLONY AT COLUMBUS STATE HOSPITAL

By Courtesy of Superintendent

improvement, but gradually lost in weight and strength. The other two cases gained slightly in weight, but nevertheless did not gain in strength. Otherwise we could see no benefit to severe cases, except that their lives were prolonged.

The colony has been of such satisfaction as to warrant its becoming a permanent feature of the institution. The management of the colony has been of such order as to combine practical as well as scientific principles. Close observations are daily made on each patient and careful charts and records preserved. Not only is this done but careful note is made of the climatic conditions, considering the amount of sunshine and rain, and the variations in temperature.

Untold benefit, of course, is derived by isolation of these cases from the crowded wards, thus, in a very great measure, preventing the spread of the disease. The most satisfactory results were obtained from those cases admitted in the first stage of the disease, while relatively good results showed in cases of the second stage. The fact that most patients recovered entirely and others manifested marked improvement, is not the most important matter in the advantages obtained by the colony, but the fact worthy of most note is that all these contaminating cases were separated from those patients in the wards free from this disease.

The death rate from tuberculosis at this institution during the last year was twenty-three per cent. against twenty-six and four-tenths per cent. for the preceding year. It is the intention of the hospital authorities to endeavor to secure, from the next legislature, an appropriation for the erection of a cottage for the cure and treatment of the tubercular insane. This would certainly be a wise expediture of money. The permanent segregation of this class of cases from the other inmates of the hospital will result in checking the spread of the disease, and in saving many lives.

OPEN AIR TREATMENT OF CONSUMPTION.

The advantages of open air treatment of phthisis pulmonalis were evident to the profession more than a hundred years ago. In the year 1796 it is said that Dr. Andrew Setwart of Scotland, recommended this treatment. His patients were recommended to be, for many hours, daily in the open air with a view to restore "the frame to its original healthy tone of vigor." He recommended horseback and carriage riding and walking in the open air. A "moderate quantity of refreshing food" was recommended, and was reinforced by "those early and regular hourse which are most efficacious to digestion." To these regulations were added vigorous rubbing with flannel or flesh brush. Testimonials are offered to show that patients following out this line of treatment did not catch cold even when exposed to "most ungenial weather with constant east wind. The record of Dr. Stewart's plant of treatment was recently found by Dr. James Finlayson, for many years librarian of the Glasgow faculty of physicians and surgeons, account of which is given in *The Hospital* for May of this year.

TENT LIFE AT MANHATTAN STATE HOSPITAL.

A scheme of tent life was inaugurated at the Manhattan State Asylum in New York City, by Dr. MacDonald in 1902. This was probably the first state hospital to provide this care for its tuberculosis patients. The working of this scheme is said to have been attended with most gratifying results. Tent life pursued gave better prospects for health and improvement than any other practical plan of treatment. This plan of treatment is still being carried out at the Manhahttan State Hospital.

The Columbus State Hospital followed the next year by putting into practical operation the open air treatment with excellent results as shown by the superintendent's report.

JUDGMENT REVERSED BY CIRCUIT COURT.

The following is a copy of the opinion of the Circuit Court in reversing a verdict of the lower court against Drs. W. J. Means and J. W. Barnes. The suit was originally brought against the Protestant Hospital and Drs. Means and Barnes, by a charity patient. The lower court in an early decision released the Hospital.

FRANKLIN COUNTY (OHIO) CIRCUIT COURT.

Protestant Hospital et al., Plaintiff in Error, vs. Beebe M. Cuthrell, Defendant in Error.

DECISION:

This case is submitted on the weight of the evidence, other assignments of error but not insisted upon.

While it is not the right of this court to invade the province of the jury in judging the evidence when it conflicts, its findings must appear to be fair and free from passion or prejudice.

Non-consent upon which the plaintiff relies to recover is not supported by persuasive evidence. Her testimony does not compare with the truth in the light of all the circumstances.

Misapprehension on her part might naturally arise on the excitement and distress of the hour.

It is not necessary to attribute to her any intention to falsify. The evidence for the defense is clear and convincing. The conduct of the surgeon was little less than heroic and should not be visited with the results of this judgment, which would be discouraging to say the least.

We are of the opinion the verdict is against the weight of the evidence upon which grounds the judgment is versed.

The case is remanded. Signed, WILSON, Judge.

The suit has become somewhat noted for the persistence of the plaintiff and an equal determination of the Doctors to resist the claim. It began in 1900. The first trial was in 1902, in which there was a verdict against the doctors for $1,000. The judge set aside the verdict as being against the weight of evidence and a second trial was held in the early part of this year. No new evidence was presented by either party. After a prolonged deliberation the jury declared a verdict of $100. The case was carried to the Circuit Court on a plea alone, that the judgment was against the weight of evidence. The finding of the Circuit Court was in accordance with this claim. The Doctors feel very much gratified over the decision of the Circuit Court. The suit is without merit and has been won entirely upon sentiment against surgical operations upon women. The plaintiff claimed that she had not been consulted by the surgeon or any one else relative to an operation. Dr. Means testified that he had carefully examined the patient twice before and fully explained to her the nature of her trouble and that an operation was necessary to give her relief. His testimony was sustained by the chief nurse at the Hospital and the House Doctor who were present at the examination.

The decision is of importance to the profession on the question of consent.

THE STATE BOARD JOURNAL OF AMERICA.

We are in receipt of the first issue of the *State Board Journal of America,* a monthly periodical devoted to the mutual interests of boards, students and colleges of medicine, dentistry and pharmacy.

The purpose of the journal, as stated editorially, is to supply a needed medium between state boards, students and medical colleges, and to serve the several national confederations and associations of examining boards; incidentally it will seek to assist candidates for licensure in every conceivable way, and furnish an index to professional progress as shown through current examinations.

Educational.

ENTRANCE EXAMINATION FOR OHIO MEDICAL COLLEGES.

The following are the questions used at the last entrance examination for Ohio medical colleges. The examination was held simultaneously at Columbus, Cleveland, Cincinnati and Toledo, Friday and Saturday, September 29 and 30, 1905; the Board of Certified Examiners consisting of Professors C. E. Albright, Columbus; Wm. Taylor Harris, Cincinnati H. J. Eberth, Toledo; Edward L. Harris, Cleveland:

COMPOSITION.—Write a composition of three to five hundred words on one of the following subjects: 1. The Rise of Japan. 2. A Day's Outing (Personal experience.) 3. Medicine as a Profession—Its Requirements and its Opportunities.

RHETORIC.—(Answer four out of the five questions, omitting any one but the third.) 1. In what order as to their relative importance would you place the following requisites of good style: *Harmony,* Clearness and *Force.* State reasons. Which of these three requisites does the sentence below most obviously offend? "The engineer sat waiting for the signal to start from the conductor." 2. Discuss the*Paragraph* as to its object and length. 3. Illustrate four different *Figures of Speech.* Name and define the Figures of Speech illustrated. 4. Define the term *Synonym.* How would you say *Precision* in speaking and writing can best be cultivated? 5. Distinguish between Grammar and Rhetoric. Speak briefly of the importance of Rhetoric. What has determined the laws or canons governing English Composition as laid down in text books in Rhetoric?

LITERATURE.—(Answer any seven out of the ten questions.) 1. Who was the father of English Literature? What was his most lasting contribution to literature? In what respects does it reflect the time in which it was written? 2. Who wrote the *Faerie Queen? Utopia? Every Man in His Humour? Comus? Pilgrim's Progress?* c. Tell briefly the story of any one of Shakespeare's tragedies. (Limit—one hundred and fifty words.) 4. Give a brief sketch of Milton's life, showing what claim he has to greatness. 5. Mention three writers of Queen Anne's time, stating a work of each. Which of these writers do you consider the greatest and why? 6. Mention the works of Washington Irving which you have read. What characteristics of his style do you admire? 7. Who wrote *Robinson Crusoe? Pamela? Tom Jones? The Vicar of Wakefield? Elegy in a Country Churchyard?* 8. Contrast the kind of literary work contributed to Scotland, by Robert Burns and Sir Walter Scott. 9. Mention one work each for the following names: Wordsworth, Coleridge, Byron, Macaulay and Robert Browning. 10. Why should Tennyson be classed as one of the three greatest English Poets? Whom would you mention as the other two? Why?

BOTANY.—1. (a) What are the two main functions of roots? (b) How do a trap root and a fibrous root system differ? (c) What are root-hairs? What is their function? 2. Define and illustrate: Aerial roots, adventitious buds, rhizome. 3. Describe the cambium layer, or tissue. State its place in the growth of a plant. and its function. 4. What is the force which causes the sap in a tree to ascend against the force of gravity? 5. What is the function of chlorophyle? And where is it most abundantly found in a plant? 6. State with some fullness the work done by the leaves. 7. Describe the leaves of the maple and the common corn, or maize, as to shape, venation and margin. 8. What is meant by a complete flower? Name the parts? 9. How is food for the seed germ stored? 10. How does sunlight affect the growth of a plant?

ZOOLOGY.—1. (a) What is a cell? (b) What are the parts of a typical cell? (c) What is meant by cell differentiation? 2. What distinguishes the Amœba or Paramœcium from an animal of a higher order on the basis of structure. 3. (a) How are the tadpole and fish supplied with oxygen? (b) How do the frog and rabbit breathe? 4. What are the essential systems of organs in one of the more highly developed species of animals? 5. What is meant by the "life history" of an animal? 6. Give genus, family, order and class of (1) man, (2) the mosquito. 7. What is meant by animal ecology? 8. What is meant by "natural selection"? And how does it operate? 9. What is the effect of surroundings upon special development? 10. State the law of distribution of animals.

PHYSICS.—(Strike out any two questions. Pin this paper to the sheets of your written replies.) 1. Compare the meter and the yard, the centi-meter and inch, the kilogram and pound, the gram and ounce. 2. Define and illustrate inertia. 3. Write the formula for space passed over in t seconds of time, in uniformly accelerated motion. If the acceleration be 9.8 meters per second, what space would o falling body pass over in 6 seconds? 3. Define: Dyne, erg, foot-pound, horse power. 4. State the mechanical advantage of the inclined plane when the power is applied parallel to the face of the plance. 6. What is meant by an atmosphere of pressue? State its magnitude in either English or metric units. 7. Describe the method of finding the specific gravity of a liquid. 8. What is sound? How is the sensation of sound produced in the ear? 9. What is light? How is it propagated? With what velocity does it move? 10. What is refraction of light? What effect has a double convex lens upon parallel rays of light? 11. What is the reason for the cooling of a body by evaporation? 12. How are "X" or Roentgen rays produced? State some of their properties.

GEOMETRY.—1. The perpendicular bisectors of the three sides of a trangle intersect at a common point. Prove. 2. Given a point A within a circle whose center is O. Let A be the middle point of a chord. Show how to construct the chord. Prove. 3. Show that in a right triangle the perpendicular from the vortex of the right angle to the hypotenose is a mean proportional between the segments of the hypotenose. 4. State and prove the proposition for the area of à trapezoid. 5. Show that the angle at the center of a regular polygon is the supplement of the angle of the polygon.

ALBERBRA. 1. Collect coefficients of x, y and z in the following expression: $4(ax-by+cz)-2(bx-ay-cz)-2(x-y+z)$ 2. Factor the following: (a) $x^2-25x+100$ (b) $(a+b)^6-1$ (c) $12ax-8bz-9ay+6by$. 3. Find H. C. F. of x^5-5x+4 and $x^4-x^3-3x^2-5x-12$. 4. Simplify: $[\{[(m^2+n^2)\div n]-m\}\div[(1\div n)-(1\div m)]\div[m^3+n^3)\div(m^2-n^2)]$. 5. Solve: (a) $(4\div x)+(3\div y)=9\div 8$, $(3\div x)+(4\div y)=11\div 12$ (b) $a(x-y)=5$, $bx-cy=n$. 6. If 54 is added to a certain number expressed by two digits whose sum is 8, the order of the digits will be reversed. What is the number?

PHYSICAL GEOGRAPHY.—1. (a) How many seasons in northern Greenland? In Ohio? In Porto Rico? (b) Why? 2. What causes areas of high and low atmospheric pressure as shown on the government weather maps? 3. What is the difference between a cyclone and a tornado? 4. By what agencies have the hills of Ohio and the North Central States been formed? 5. What causes rain fall? 6. If the Mississippi river were replaced by a lofty range of mountains what would be the probable effect upon the climate of Nebraska and Indiana? 7. Labrador and Scotland have about the same latitude. Account for their difference in climate. 8. What is the cause of flowing springs? 9. What was the origin of the bitumeneous coal beds? 10. In what ways will the completion of the Panama Canal benefit the United States?

Chemistry.—(Strike out any two questions. Pin this paper to the sheets of your written replies. 1. Define the terms: Element, acid, base, salt, solution. 2. Water: (a) State its symbol and name its constituents with their atomic weights. (b) How is the composition of water determined by the analytic method? 3. How is solution in liquids affected by temperature? In gasses by pressure? Illustrate each. 4. State the difference between: (a) Physical and chemical changes. (b) Mixture and compound. 5. Hydrogen: Describe it as to state, atomic weight, characteristics, and state how it may be prepared. 6. Sodium: Describe it as to state, characteristics, and name some of its more common salts, giving symbol for each. 7. Combustion: What is it chemically? What are the products of combustion in oxygen? 8. State the difference in composition between mercuric oxide and mercurous oxide. That is, distinguish between "ic" and "ous" oxides. 9. Write the symbols for: hydrochloric acid, sulphuric acid, mercuric chloride, calcium carbonate, potassium chlorate. 10. Write the names for: HNO_3, NH_3, CO_2, KOH, $HgCl_2$. 11. State Avagadro's Law. 12. What is meant by the neutralization of an acid?

U. S. History.—1. (a) How was Alaska acquired by the United States? (b) Do you think it a profitable acquisition? (c) Give reasons for your opinion. 2. (a) What was the attitude of France toward the colonies during the Revolutionary war? (b) What brought about this feeling? 3. When, where, and by whom was the final surrender of the confederate forces made? 4. Name at least five of the duties of the president of the United States. 5. What are the qualifications of United States senators, with respect to: (a) Age. (b) Citizenship. (c) Place of residence. 6.How many amendments have been made to the constitution of the United States? (b) Which ones refer to slavery?

Latin.—v. Translate one of the following: Apud Helvētiōs longē nobilissimus fuit Orgetorix. Is rēgnī cum cupiditāte inductus, coniūrātōnem nōbilitātus fēcit, et cum fīnitimīs cīvitātibus pācem et amīcitiam cōnfīrmāvit. Helvētiī undique locī nātūrā continentur; ūnā ex parte flūmine Rhēnō, quī agrum Helvētium ā Germānis dīvidit, alterā ex parte monte Iurā, tertiā, flūmine Rhodanō, quī prōvinciam nostram ab Helvētiīs dīvidit.

Flūmen est Arar, quod per fīnēs Haeduōrum et Sēquanōrum in Rhodanum īnflui incrēdibilī lēnitāte, ita ut oculīs cursus intellegī nōn possit. Id flūmen trēs partēs cōpiārum Hēlvetiī ratibus ac intribus iūnctīs trādūxerant. Ad quārtam partem, quae nōndum flūmen trānsierat, dē tertiā vigiliā Caesar pervēnit. Eos impeditōs et inopinantēs aggressus māgnam partem eōrum concīdit.

Hīs pāgus ipse Helvētium cōnsulem Rōmanum patrum nostrōrum memoriā interfēcerat et ēius exercitum sub iugummīserat. Ita sīve cāsu sīve cōnsiliō deōrum immortālium, quae pars cīvitātis Helvētiae īnsīgnem calamitātem populō Rōmānō intulerat, ea prīnceps peonās persolvit. Caesar autem pūgnābat ut nōn sōlum pūblicās sed etiam prīvatas iniuriās ulcīscerētur, quod Helvētii ēius socerī avum interfēcerant. 2. Give mode and tense of any five of the following: Conciecit, mittunt, vocavissent, muniat dolebit, responderant, venient. 3. Write in Latin two of the following: Then, there were vast wildernesses in these places. Faustulus, the shepherd of the king carried the twins into his hut and gave them to his wife to be educated. Caesar hastened to Gaul from Rome and came to Geneva. 4. Decine any five of the following: Voces, multitudinum, patrum, infantes, oris, civitas, viroum, militis, urbes. 5. Give the principal parts of any three *Latin* verbs and an *English* derivative of each.

Medical News Notes.

Dr. A. M. Steinfeld left September 13 for Vienna where he expects to pursue his professional studies for the coming year.

Dr. and Mrs. Clarence S. Latham of Hilliards have announced their marriage, which took place in Columbus, August 29, Dr. B. F. Dimmick officiating.

Dr. Latham is a graduate of Starling Medical college and his bride was a trained nurse at Grant hospital when they became acquainted.

Dr. Sophronia Fletcher, the first woman physician in Boston, is 99 years old. Her grandfather fought in the battle of Lexington.

The second annual meeting of the Tenth District Medical Association will be held on October 5, 1905, at 10:30 a. m., in London, Ohio.

Dr. C. S. Means spent several days visiting the hospitals of Pittsburg and also attended the national meeting of the Eye, Ear Nose and Throat men, which convened in Buffalo, Sept. 14, 15 and 16.

COLUMBUS HEALTH BULLETIN FOR MONTH OF AUGUST, 1905. —One hundred and fifty-four death certificates were received at the health office during the month of August, 1905, being seven less than the corresponding month of 1904.

Twenty-nine children less than one year old, and eight whose ages ranged from one to five died. Twenty-nine certificates were signed for persons over sixty years old. Six died from accidental violence and two committed suicide.

The important causes of death: Diphtheria, three; typhoid fever, ten; tuberculosis, twenty-five; meningitis, five; organic heart disease, nineteen; cholera infantum, fourteen.

Diphtheria has caused apprehension during the entire year, not in the number of cases, but in the large number of foci contagion. An epidemic is not only possible, but probable, unless the people cooperate with the health department. There are two sources of danger in all threatened epidemics: First, a failure to recognize and isolate mild cases; second. a disregard of danger in visiting persons who have contagious diseases.

Two good rules to be observed: First, do not allow children to visit playmates who are sick until the sickness is known to be non-contagious or non-infectious; second, take all children who are not well to a physician to determine the nature of the disease before allowing other children to mingle with those that are sick.

TUBERCULOSIS.

In Columbus one out of every seven deaths is attributable to consumption. This disease is not contagious in the same sense as smallpox, scarlet fever, diphtheria, etc., neither it is hereditary, as was formerly supposed. Its cause is a germ, designated the "Tubercle Bacillus." This germ finds lodgment in some organ of the body, usually the lungs and if the system is unable to withstand its onslaught, tuberculosis results. Comparatively speaking, the germs are found only in the sputum and spittle of the patient.

There are two prominent prophylactic measures to be observed in fighting this much dreaded disease. The first relates to the individual who has, as yet, *not contracted the disease, but has a constitution illy fitted to throw off the invading germs.* The second relates to the care of the sputum from tuberculosis patients.

For those who have inherited or acquired a weakened condition of the body which renders it unable to resist the growth of these germs and the consequent production of tuberculosis, it is necessary to observe certain regulations regarding occupations, mode of living, etc. The occupation should be such that the person is in the open air, or amid good sanitary surroundings. All occupations amid dust, dirt, insufficient or foul air should be given up, and an occupation more compatible with the person's physical condition selected. The living and sleeping rooms should have at all times plenty of fresh air. The food should be of the most nourishing kind; food that is capable of keeping the body in as nearly perfect degree of health as possible. The diet should be regulated by the family physician.

The person who has consumption has a duty to perform to the public which can in no way be ignored. That duty consists in observing certain measures, which inflict no unnecessary hardships upon the consumptive. but if observed by all consumptives would result in saving 4000 lives yearly in the State of Ohio alone. (Dr. Probst.)

The germs are found in the sputum of the patient. If this sputum is properly cared for, the patient may freely mingle with the public.

The following is a list of measures, prepared by Dr. Probst, to be observed by the consumptive.

'Consumption may exist for a time with but little cough and no expectoration. During this period no special precautions are needed. The danger begins when there is expectoration.

"In the first place a consumptive should always sleep alone; and if possible have a room to himself. He should not kiss or be kissed by any person, especially on the lips. He should be clean shaven. A heavy beard makes it difficult to expectorate, and is sure to become soiled by sputum. He should have his own drinking vessel; and knives, forks, spoons, etc., used by him should be boiled thereafter.

"He should never expectorate upon the floor in any house, office, workshop, car or other public place. While it is much less dangerous to expectorate upon the street or sidewalk, this, too, is to be avoided.

"In his home he may expectorate upon paper or bits of rage provided these are at once burned.

"He should never use a handerchief for such purpose. This is a common and especially dangerous practice. The sputum dries and on unfolding the handkerchief numerous germs are set free. A cup with a handle may be used to spit into. Paper cups to go inside of an outer cup are very convenient. They may be procured at most drug stroes. The paper cups should be burned and the outer cup disinfected by placing it in boiling water at least once a day. In all cases care must be taken not to soil the fingers. If this happens the hands should be at once thoroughly cleansed with soap and water.

"Where natural gas is used for heating purposes, as it largely is in this state, it may be very inconvenient to burn paper cups, rags, etc. In that case the sputum should be received in a vessel containing a solution of crude carbolic acid—an ounce and a half to a quart of water; or, lysol may be used—one-half ounce to a quart of water. This vessel may be emptied into the sewer, and it should be thoroughly cleansed each day.

"The ordinary cuspidor with sloping sides is not suitable for the use of consumptives, as the sputum on the sides soon dries and may contaminate the air of the room. A vessel on the floor for sputum should be placed on a square of linoleum or something of like character, which should be thoroughly wiped with the disinfectant solution every day.

"The greatest difficulty is to dispose of the sputum out of doors. There are several styles of pocket spit flasks that may be used. They admit of easy cleaning, and prevent any escape of the sputum in the pocket. Consumptives hesitate to use them, as they call attention to their disease. They may be almost completely hidden in a handkerchief, and with a little practice one could use them without detection.

"Squares of old linen cloth, or of Japanese paper, can be used to receive the sputa, and these may be placed in a stout paper bag and carried in the pocket. Bag and contents should be promptly burned. A newspaper can be folded and cut so as to have leaves like a small book. This can be slipped into a stout paper envelope, and carried in the pocket. The sputa may be received between the leaves of the booklet, envelope and all to be burned daily.

"Care should be taken to prevent sputum getting upon the clothing or bed covers. The outer cover of the bed, which is most likely to become contaminated, should be of linen or something which may be frequently washed or boiled.

"The outer clothing a consumptive wears should be hung out of doors in the sun once or twice a week. This will disinfect it.

"There is another precaution that should be taken by consumptives. It has been observed that a person in coughing expels myriads of minute particles of saliva. It has been demonstrated that a consumptive may expel many tubercle bacilli in this way. He should always, therefore, when coughing, place a handkerchief before his mouth and turn his head away from any person very near him.

"The room occupied by a consumptive should not be carpeted. Bare floors, oiled or painted, with rugs should be the rule. There should be no needless draperies. No broom or dusting brush should be used in this room. Cleansing should be done with moist cloths, and the floor should be gone over frequently with a cloth wet with a disinfectant. For this purpose corrosive sublimate one drachm to the gallon of water is excellent, having no odor. It is a violent poison if taken internally, and must be handled with care.

"Can any one with consumption be excused from carrying out these very simple precautions? Remember that the vast majority of cases of this disease are caused by the germs cast out in the sputum of some consumptive. Signed, McKendree Smith, Health Officer.

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SOME OBSERVATIONS ON ASEPSIS IN GENERAL SURGERY.*

BY W. J. MEANS, A. M., M. D.,

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"Asepsis purposes to prevent infection of a wound by excluding or destroying all pathological microörganisms before they come in contact with it. Antisepsis purposes to destroy all infectious germs that settle in the wound and produce inflammation, or at least to arrest their development."

Both methods are closely linked together and are used almost invariably by surgeons without any effort to draw the line between them. With a comprehensive knowledge of the possibilities of each method and their limitations, there is no question in my mind that the use of both will bring the best results in general surgery.

There can be no doubt that modern surgery owes the main part of the progress it has made, in the last forty years, to the use of antiseptics. Antisepsis provides not only for defence against known germs that may be present, but also against many accidental infections. Therefore, to do away with antisepsis entirely, is to relapse into some of the old uncertainties with regard to the course that wounds may take, since the invasion of germs cannot always be foreseen and provided against without some agent that will protect against invasions and inhibit their growth. For asepsis we can say that it is the rational outcome of years of experiment and study. It has its place in modern surgery and is the basis of that most potent factor in the prevention of wound infection—scientific cleanliness.

The success of abdominal surgery without antiseptics is a well known fact and establishes beyond question the practicability of doing away with chemical agents in major operations to combat germ infection. The advocates of antiseptic surgery maintain that this success is not due to the fact that absolute asepsis is always obtained, but that the peritoneum has quite a marked tolerance for germ life, and if not in too large numbers will resist colonization. This, however, is begging the question in my judgment. It is results that we are after and if they can be obtained without the use of antiseptics it certainly establishes the fact that it is a safe and practical procedure. I do not wish to be understood as advocating a strict aseptic course to the exclusion of antisepsis. The thought that was uppermost in my mind in preparing this paper, was that we should give aseptic methods more consideration in the preparation for surgical operations and wound dressings and a closer study of the uses of antiseptics as supplementary agents.

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* Read before the Columbus Academy of Medicine, October 2, 1905.

In the earlier history of antiseptic surgery the sources of wound infection were not as well understood as at the present time. For instance, on the supposition that a common course of infection was through the air, antiseptic sprays were used to impregnate the atmosphere to destroy any pathogenic germs that might be floating around. Experience and laboratory tests have demonstrated that this source of infection is not a potent one, from the fact that microörganisms like dust tend to settle, leaving the atmosphere in a measure free and that if the walls, floor and other surfaces where dust may settle are made clean and dust prevented during the operation, there will be no practical danger. In fact contact of pure air is, through its evaporating power, beneficial to wound repair.

Generally speaking it is now conceded that the most common source of infection is by contact with external matter, dressings, operator's hands, instruments, sutures, material and the bacteria indigenous to the tissues. This being the case it brings us to the problem of the best way to sterilize.

Sterilization of inanimate material such as dressings and instruments is a simple problem in favor of asepsis. Heat in some form, either dry or moist, at a proper temperature destroys germ life. The form of heat to be used varies with the material to be sterilized. Antiseptics are always secondary to heat and only to be used in emergencies. An exception should be noted in the preparation of absorbable suture material such as catgut and kangaroo tendon. We therefore pass the question of sterilization of inanimate material with the thought that in this particular asepsis is the only reliable method.

Sterilization of living tissue presents a different and more complicated problem. It is out of the question to apply heat with germicidal intent. Antiseptic agents cannot be used for a germicidal purpose. Chemical agents of sufficient strength to destroy bacteria will destroy tissue cells as well. Therefore, sterilization of the hands of the operator and the wound area must be largely by aseptic methods.

The various methods for hand and wound sterilization that have been advocated in medical literature in the last few years indicate that a perfect method has not been reached. In fact a wave of helplessness has spread over the surgical world in the face of laboratory findings. The basis of hand sterilization depends upon mechanical methods and consists in the removal of skin grease, dirt and bacteria. How to accomplish this is the question. It is recognized that the primary work must be done with soap and water and energetic scrubbing. There is no disagreement upon this point, and yet we note a wonderful difference in opinion and conduct on the part of professional men as to the time necessary in washing and the means used. It is unfortunate, I think, that the antiseptic idea has become so firmly fixed in the minds of the profession. The potency of antiseptic solutions is so thoroughly ground into our ideas that it has become a habit. Nurses, doctors and non-professional persons may be seen every day dipping their hands into a solution of bichloride of mercury or carbolic acid made with unsterile water, sedately wiping their hands on an unsterile towel and then going about the manipulations of wounded areas with confidence apparently that the microörganisms have either been killed or chased away. This ignorance of the principles that underlie true sterilization, and I might say ordinary cleanliness, brings scientific knowledge into ridicule. I might suggest here that a practical sterilization of the hands for general purposes can be obtained by vigorous scrubbing in clean hot water with pure soap and proper attention to the nails without the use of antiseptcs. It should be clearly understood that the normal skin oil must be removed by a solvent. This observation obtains in the management of the wound area as well as the hands of the operator. Whatever potency an antiseptic solution may have as a germicide or inhibitory agent when it is applied to the skin that is covered with oily matter, whether it be normally from the skin or there from contact in other ways, an insoluble compound is formed that is inert. This is especially true of mercury, carbolic acid and formaldehyde. If any one is in doubt as to the truthfulness of this proposition, let him try to cleanse his hands with any of these agents in solution. The conditions in which his hands are left will convince him beyond question something is wrong, that he has not obtained even ordinary cleanliness. Again, it is necessary to remember the fact that bacteria inhabit the hair follicles, sweat glands and crevices of the skin. Surface cleansing will not always reach into the depths of these places.

It has been shown that primary sterilization can be obtained by thorough washing, nail cleansing, etc. This is susceptible of proof by bacterial tests. Later, however, through the normal activity of the sweat glands the bacteria are forced to the surface, where cultures of sutures drawn between the fingers will show bacterial activity. This is also the case when antiseptics are used to rinse the hands and surface.

Recognizing the fact that the skin excretions may reinfect the surface, some operators adopt the dry method while operating, this is, the use of cotton gloves, removing them when they become soiled, thus keeping the hands dry. To do this requires a supply of several pairs of gloves on hand during a single operation. The inconvenience and impracticability of this method has limited its adoption. Rubber gloves are extensively used, but it is recognized that accidents are liable to follow their use. They act as sweat pads, and no difference how clean the hands may be before the gloves are put on, there follows a moisture that brings bacteria to the surface, and if a puncture or tear occurs in the glove it becomes a source of infection. Some surgeons claim to obviate this by filling the glove with a one to five thousand bichloride solution before adjusting to the hand. Others use a solution of creolin. The action of the sweat on the chemical neutralizes its antiseptic properties and hence there cannot be any lasting effect from its presence.

Dudley Allen of Cleveland, in a paper read before the National Surgical Association, gave the result of 3500 cases of surgery with 377 bacterial examinations of the operator's hands, following cleansing with soap and water, immersion in 1-5000 bichloride solution and the use of rubber gloves. He states that the examinations were negative and that very few instances of infection occurred in the whole series. I quote some of his conclusions:

(1) That washing of the hands and arms should not be too violent, and that the use of a scrub brush should be confined to the hands. (2) The arms should be washed by rubbing with gauze or a towel. (3) The use of the nail cleaner about the base of the nails was unnecessary. (4) Alcohol was not adequate as a germicide, when used upon the hands. (5) That a solution of 1-5000 bichloride of mercury, used after washing, to disinfect the hands and arms, and then used in the rubber gloves, was thoroughly satisfactory in protecting against the development of bacteria within the gloves during operation. (6) That the rubber glove was a guarantee of safety, not only to the patient, but to the operator himself, when operating upon infected wounds. (7) That the mask over the face was not necessary.

In the last few years there have been quite a number of articles in the journals advocating coverings of the hands with various kinds of varnish as a substitute of the rubber glove. These have not proven practical.

The suggestion of Allen's that the skin of hands and arms should not be harshly treated is a good one, and applies as well to the wound area. An occasional operator may use the scrub brush vigorously to advantage, but its daily use will soon put the skin in a state of irritation and roughness that almost precludes sterilization. The smoother and more pliable the skin can be kept, the easier it is made clean and kept clean. The nails should be carefully manicured and care taken that the attachment of the skin and nails is not disturbed too much. Examine the nails of nurses in the operating room, where they are constantly using the nail file and you will note in many of them a retraction of the attached surface that is way beyond normal. The numerous antiseptic washes advocated and used so extensively are referred to only to be condemned. I might mention permanganate of potash to be followed by oxalic acid to remove the stain, or the Harrington solution, consisting of a 1-5000 solution of bichloride of mercury and alcohol, or sulphate of soda and chloride of lime or turpentine. Others might be mentioned, but none to be recommended.

Senn, in a recent article, extols the antiseptic and germicidal properties of iodine very highly, and suggests as a prevention against infection, the finger tips may be dipped in tincture of iodine.

After a careful study of the different methods of sterilization of hands and wound area I have come to the conclusion that a strict aseptic method is the only one upon which the surgeon can depend primarily, followed by the use of chemical agents for their inhibitory action. This method consists in thoroughly washing in pure soap and sterile water, treating the nails, rinsing the surface with clean water to remove the soap, then the hands and arms may be submerged in a 1-3000 bichloride solution or a 1% carbolic acid solution. The management of the wound area is along the same lines.

The principle governing the use of antiseptics obtain everywhere, whether in the operating room of a modern hospital or in general practice. All that is necessary is to remember that chemical agents, like heat, if used to germicidal strength will destroy living tissues; if used in the presence of oil, blood and general debris, ordinary cleanliness cannot be obtained, let alone inhibition or destruction of bacteria. Then of what use are antiseptics? In solutions that are not injurious to the tissues they are protective alone. They inhibit the growth of bacteria that may be present and protect from further invasion. In my judgment much harm arises from the indiscriminate use of antiseptics about the body. How often do we meet with the local effects of carbolic acid and mercury? How often do we meet with the constructional effect of these and other powerful antiseptics used to wash out natural cavities, such as the bladder, vagina, endometrium, rectum, mouth, etc., and the same may be said of artificial cavities.

CONCLUSIONS.

(1) Aseptic methods, whether in special or general practice, are the only practical ones for sterilizing living tissues.

(2) Antiseptics should be used alone for the purpose of inhibiting the growth of bacteria and protecting from invasion from without.

(3) Owing to a chemical action of antiseptic agents with oil, blood or general debris ordinary cleanliness cannot be obtained with these agents alone.

THE PREDISPOSING AND ACQUIRED CHARACTERISTICS OF THE ALCOHOL AND DRUG HABITUE.*

BY C. D. MILLS, M. D.,

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Our subject limits us to the personality of the habit former, and yet it will not be a serious digression if we incidentally refer to some of the environmental influences that are constantly operating upon susceptible individuals.

That the laity should manifest a seeming and probably a real indifference about this subject is not so amazing as is the attitude of the medical profession toward a malady more serious than pneumonia, tuberculosis or any other of the fatal infections. The average physician and the average layman, strange to say, think very much alike about the drunkard, considering him a willful and vicious violator of civic, physical and moral law who deserves contempt and prompt and severe punishment. The readiness with which they answer the question as to why some men are abstainers, some men moderate drinkers and others excessive drinkers, to be simply a matter of will power, is in inverse proportion to their knowledge of a very intricate and difficult problem.

Fermented drinks have been used from as remote a period as five thousand B. C., while the pleasurable sensations of wine drinking were discovered thus early, and its evil consequences were soon determined and restraining measures by moral suasion and punishment were early instituted.

Heroditus tells of the feasts in honor of Diana, where more wine was consumed than in all the rest of the earth. When he visited Egypt in four hundred and fifty-four B. C., he relates that at their conventional banquets among the wealthy classes when they had finished supper a man carried around in a coffin the image of a dead body, carved in wood, and showing this to each of the company he said, "look upon this, then drink and enjoy yourselves, for when dead you will be like this."

In Sir J. Gardener Wilkenson's Popular Accounts of the Ancient Egyptians is figured women at a feast drunk and vomiting. These are copied from Theban tombs, 1500 to 1000 years B. C. Without going into further detail, on nearly every page of history is the story of drunkenness and the record of innumerable ineffectual efforts to arrest it. A special research committee, appointed by the English Society for the Study of Inebriety, made the following report in April, 1901:

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* Read before the Tenth District Medical Association, October 5, 1906.

1. The genesis of inebriety in the individual depends on three essential factors, of which one is inborn and the others acquired.

2. The inborn factor is a capacity for enjoying the sensations evoked by indulgence in alcohol, without it men would not drink for they would not enjoy drinking.

3. The acquired factors are a personal experience of the sensations evoked by alcohol; without this acquired knowledge, this memóry, no man would crave for the sensations in the sense the inebriate craves and the increased delight in drink which continued indulgence in drink confers.

4. The inborn capacity for enjoying alcohol like other inborn traits is certainly heritable.

Now let us briefly consider the inborn factor. Patton, in his recent work on psychiatry, defines the addiction as a symptom of a functionally unstable nervous system; keeping in mind this definition and conforming ourselves to the personal equasion, I insist that contrary to the generally accepted view, drinking is not a question of morals, only so far as the first indulgences are a violation of the code of ethics of many people. How unreasonable that anyone should maliciously and with malice aforethought do the thing that he knows is bringing to himself irrevokable ruin. The so-called immoralities are the certain sequences of chronic alcoholism and are the symptoms of functional and structional changes due to the toxic effects of a poison upon the nerve centres. Craving for alcohol has nothing to do with strength and vigor of character; neither has education anything to do with appetite. No degree of ecclesiasticism or erudition can change a pleasant sensation into an unpleasant one. Either may create an abhorrence for alcoholic excess, but neither can alter a nervous organization that responds with emotions of delight to an alcoholic indulgence. We cannot substitute a delight in Shakespeare or Paderewski for a craving for alcohol.

You recall Lydston's illustration in his Diseases of Society, where he says "that certain moralists claim that inasmuch as the inebriate willfully took his first drink, the question is of moral significance only. This is as logical as that typhoid is to be cured by moral suasion because the victim voluntarily drank water containing the germs of disease."

Noah is represented as being righteous before the Lord, and yet we read of his becoming so thoroughly intoxicated that he lost all sense of modesty and was found going about his tent without any clothing.

We are told that Lot was permitted to leave the wicked cities of Sodom and Gomorrah on account of his righteousness, and yet he became so beastly drunk that he did not recognize his own daughter, and while in this condition both the daughters of Lot became with child by their father.

We read with abhorrence and just indignation of the atrocities of the Moslems and yet in obedience to the teachings of the Koren, one hundred and eighty millions of Mohammedans have been abstainers for thirteen hundred years.

This inborn susceptibility may remain latent for many years and even through the entire life, particularly in women, who, although possessing an unstable nervous organization, have also an innate spirit of idealism, and further they are more securely entrenched behind the protecting influences of home than their exposed brothers. This statement with reference to women needs particular emphasis, as the frequency with which we are confronted with homes where the boys are dissipated and the girls total abstainers is urged as an argument against the hereditary tendency to alcoholism.

Referring again to the question of latency I have had many patients who had remained abstainers until they were twenty or thirty years of age tell me that their first drink had brought to them a sense of repose and well being entirely new in their experience. There had come into their lives a temporary restfulness to their unstable nervous systems so that they were willing to take chances on subsequent disaster in order to renew again and again their first experience.

Within the past six months a very intelligent man of thirty was brought to us for treatment who, after he was perfectly sober, gave this history: He had a decidedly neurotic temperament.

He had always been restless, uneasy, found it almost impossible to sit still anywhere; was not a good sleeper; general health good. Graduated from the high school of one of Ohio's county seats, then at nineteen came to Columbus, where he was employed in a plumbing establishment. He was sent out by his employers to do some work at a wholesale liquor store, where by invitation he took his first drink. It was old whisky, which he was told was perfectly harmless. He became intoxicated to the point of insensibility, and yet the pleasurable sensation that preceded insensibility was of such a character that he soon drank again and became a confirmed drunkard.

In the language of Defendorf, "defective heredity is the most etiological factor and is manifested by a diminished power of resistance." Some observers claim defective heredity exists in eighty per cent. of all alcoholics. Let this introduce us to a brief study of the acquired characteristics of the alcoholic. Primarily, there is an exaggeration of the predisposing characteristics, the unstable nervous system is more unstable, a restless, dissatisfied nature is intensified; power of resistance is increasingly diminished; power of mental application gradually fails: irritability and unjust criticism of his best friends is common: a desire to shift the responsibility for his unfortunate condition upon his wife or immediate family is frequent; the impairment of memory exists, and more disastrous than all, are the inroads upon the moral sensibilities and the failure to appreciate the seriousness of the situation. I am frequently led to believe that no alcoholic has a full comprehension of the gravity of his malady. Do not confound this statement with the transient penitence that immediately follows a drinking bout. This only means that he feels miserably uncomfortable, and for the time being, thinks, and possibly states, that he has taken his last drink. This has no significance, and is forgotten in a day. An extreme case comes to my mind: An old soldier of sixty-two had lost his property, his wife had deserted him, he had had delirium tremens, neuritis, an advanced arterial sclerosis, a myocardial degeneration, urine with low specific gravity, and a trace of albumin, a picture of physical wreckage. After the acute effects of alcohol had subsided, I asked him if he did not think this was a very serious matter, hesitatingly, he said he "did not know but what it was rather bad"; I said, "if you had boys would you want them to drink in view of your experience?"

He replied that if they could drink moderately, he thought it would be all right, and in fact, a pretty nice thing. The memory of the pleasurable sensations he had experienced with moderate indulgence overshadowed the disastrous condition which his diseased sensorium was unable to comprehend.

The alcoholic is eminently plastic; he is easily moulded by his environment; he is swerved this way and that by every extraneous force; there is no power of determinism, no fixedness of purpose; he is an excellent subject for hypnotism; he easily places himself in a passive state, and by suggestion, rapidly passes into the first stage of hypnosis, and often to complete somnambulism; he is frequently egotistical, having an exalted idea of his own importance: indeed, he approaches the expansive ideas of a paretic. He is a hale fellow, well met, and you admire him, but he sorely disappoints you. The advanced dypsomaniac needs protection against himself, and the state needs protection against him. What shall be done with him is not a question before us today. Why do some drink moderately and others drink to excess? First, the moderate drinker of today is the immoderate drinker of tomorrow; as the taking of alcohol creates a demand for more alcohol. Second, one person has a pleasurable sensation from a small quantity and a larger amount renders him uncomfortable. Others do not reach the point of exhilaration until comparatively large quantities are taken. A recent patient said to me he would never drink if he had to be confined to one or two drinks. It is an interesting fact that Jews become intoxicated very unusually, yet most of them are moderate drinkers. I have never treated a Jew for alcoholism or any drug addiction, and I have never heard of one being treated. The Scotch are not abstainers, but generally do not drink to excess. In Greece, drunkenness was formerly more common than now. Adam Smuth, in his "Wealth of Nations," observed that the French of the wine-growing districts were much more temperate than their northern compatriots. Savage tribes like the Indians are extremely susceptible to the action of alcohol. They take to firewater with astonishing avidity. Most Germans drink beer, a very great many do not drink to excess: Why? The English committee to which I referred say that races that have long been exposed to the action of alcohol, have grown more and more temperate, explaining it upon the theory of the survival of the fittest. By the process of evolution, the weak and unresisting having fallen by the way, the strong and unsusceptible surviving as progenitor of races. This is an hypothesis that seems to be well founded, though no one can say with assurance that it is true. Fluctuations in the percentage of drinkers, as counted from day to day, or from decade to decade, would not militate against this theory. The steps of evolution must be measured during the sweep of ages. Want of time forbids me to differentiate between the ordinary alcoholic and the dypsomaniac. Neither have I entered into the comparative merits of heredity and environment. The discussion of these questions would prolong this paper to too great length. Just a moment to the consideration of the opium habitue.

The two chief predisposing factors are an unstable nervous organization and an unwillingness to bear pain. There is an intimate relationship between the alcoholic and the opium user. Very frequently a double addiction exists. I do not recall a morphine patient who did not use alcohol as well. It is much to be regretted that the family physician is the initiative factor in very many cases. We will hail with delight the new-born day when physicians will dispense alcohol and opium with extreme caution. Alcohol is constantly prescribed without any consideration of its physiological action, and the lazy physician is of easy access who uses his hypodermic with unwonted frequency rather than take the time to patiently investigate the cause of pain and, if possible, remove it. There are infinitely worse things than pain and one of these is the opium habit. Lydston paraphrases Shakespeare as follows:

"The patient better bear the colic that he has, than to fly to dangers that he knows not of."

In addition to the authorities named in the paper I have found valuable material in Reid's Text on Alcoholism.

PUERPERAL ECLAMPSIA.*

BY THOMAS L. COOKSEY, M. D.,
Secretary Clinton County Medical Society, Wilmington, Ohio.

It is with some degree of timidity we appear before this well-known medical society in our first effort at writing a paper. We cannot hope to present to you anything new or modern, but only to call forth from the archives of your memory some old things for discussion in regard to puerperal eclampsia.

This is a disease of very rare occurrence, many practitioners having passed years of service without seeing a case (very fortunate indeed). They have no regrets.

My first case of obstetrics after leaving the tender care of the venerable W. H. Taylor was a spina bifida. We were somewhat dazed at the double-headed monstrosity as it presented, and after delivery informed the family that this was unfortunate and rare and would advise them further at my next visit. I lost no time in posting up so that I could tell them what we had. Imagine my feelings with my second case of obstetrics when I called and found the patient in a violent attack of spasm. Some one has said there is a time in every one's life when they wish they hadn't been born: that was my time." However, we remembered the injunction of our professor, deliver at once, so we proceeded to diolate the uterus, applied the forceps and delivered the woman of a dead baby. The mother had three spasms before delivery and one following, and then went on with an uninterrupted recovery.

We have had three cases since in our eight years' practice, with about the same history.

As to the cause of puerperal eclampsia there are many theories advanced and yet the limit seems to have not been reached. One author claims it is due to a sudden entrance of toxines into the circulation, provoking convulsions and analogous to chills in pyemia, and in answer to the question why infectious processes in other parts of the body do not give rise to eclamptic attacks, he says the sudden and rapid entrance into the circulation of toxines is only possible in a part where the absorptive power is as great as it is in the placental site. It has always been a question with me what part a pathological placenta played in the course of the disease. Is the change there a cause of other changes in circulatory system or is it the result of changes somewhere else. The later theory seems more pleasurable to me that a diseased placenta is a result and not a cause. If the theory that eclampsia is due to a latent microbic endometritis during pregnancy we can understand how the placenta may become the center of the field of toxemia. We have in all these cases a renal insufficiency associated with albuminuria as a rule and contracted arterioles of the kidney as a cause of renal insufficiency and albuminuria a secondary result.

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* Read before the Miami Valley Medical Society, October 10, 1905.

We believe that the first cause for all changes in other organs comes from uterine irritation and transmitted through the sympathetic nerves to the kidneys with results as stated, hence a contracted empty uterus is a safe one and frees patient from further danger. The diagnosis of these cases are as rule easy, first, from epilepsy by the previous history and the frequency of attacks, eclampsia being oftener; second, from hysteria as in these total loss of consciousness does not occur and if during attack the pupil reacts to light, then you are sure you have a hysterical case, as they do not react in either of the others.

You are warned of appending danger, the patient complains of swelling under eyes and of limbs and feet, also change in quantity of urine passed, also headache, disturbances of vision, spots before the eyes, etc. Any of which symptoms justify an examination of urine, followed by corrected diet, preferably milk, and an eliminative treatment, through the bowels, kidneys and skin.

Remedies in post-partum eclampsia are often useless, in that occurring toward the end of pregnancy. Morphine will usually abort an attack of eclampsia for the time being, but nothing gained. Veratrum viride, while not a specific, certainly is one of our best remedies. I prefer Norwood tincture, ten drops hypodermically every thirty minutes to one hour as patient can take same.

When I am called to a case of eclampsia and patient has had more than one spasm, I have but one rule and insist upon it: Proceed to bring about labor, it matters not at what period of pregnancy. It's the *only safe plan* for the mother, and only hope for the delivery of a live baby. Multiple attacks mean a dead baby and endangers more and more the life of the mother.

ACNE.*

BY E. J. EMERICK, M. D., COLUMBUS, OHIO.
Dermatologist to Grant Hospital.

Acne is a disease of the sebacious glands of purelyan inflammatory nature, but the term acne includes that condition due to the accumulation of sebacious material within the sebacious ducts by which they are occluded, and which is known as comedos. This is really the first stage of acne in the majority of cases, and which is otherwise very properly called acne-punctata. Acne may, however, occur in the absence of comedones.

Of all skin diseases acne is the most common and, I think I am safe in saying, the most neglected. It is probable that but few persons escape having at least a few "black-heads" or "pimples" before or about the time of puberty, and a large percentage of men and women pass through a more or less severe attack of acne vulgaris before reaching adult life. The mental distress and the amount of disfigurement (at times present from scaring), which is caused from acne, makes it most important that we should understand well the management of this affection, and not regard it as trivial and beneath our attention.

Acne is, as I have said one of the most common skin diseases. It includes about 8% of all diseases of the skin. Many cases go untreated because patients have been assured by their physician that the case is incurable, or that it will get well of itself in time, (in other words that they will outgrow it), or that it will not do to interfere with it for fear of driving it in and causing some more serious malady, etc., etc., etc. These excuses may answer as refuges of ignorance to satisfy the conscience of the physician, but entail a vast amount of shame and humiliation on the part of young people, particularly young women. Acne occurs in young people of both sex, appearing about the time of puberty. It does not often occur in children and on the other hand rarely makes its appearance for the first time in mature years.

The characteristic early lesion of acne is a red papule which begins about the orifice of the sebacious gland and involves the surrounding tissue in the inflammatory process. The sebacious material which clogs the gland causes pressure upon the surrounding parts, consequently there is a disturbance in the circulation, and as a result an inflammatory action begins and we have the deep red painful papules which if allowed to develop further forms pustules.

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* Read before the Columbus Academy of Medicine, October 2, 1905.

The eruption is located chiefly upon the face, but may occur upon the neck, back, shoulders, or chest, at the same time or independently. It may, however, occur on any part of the body supplied with sebacious glands. While it is a chronic disease, the individual lesions run a comparatively short course and it owes its chronicity to their successive crops rather than to the long standing of the individual lesions. Consequently we will find all stages of the disease in the same individual.

ETIOLOGY—There are a great variety of causes which may operate to determine an eruption of acne. The external causes are various—workmen in tar are often afflicted with acne. Anything that tends to retard the flow of sebum, or harden it, predisposes to acne. After acne has begun each lesion acts injuriously upon the neighboring glands by pressure and by extension of the surrounding inflammation, and thereby excites new outbreaks. There is also a germ theory advanced as the cause of acne. The comedones swarm with microörganisms, which in all probability do produce putrefactive changes, making the otherwise previously inoffensive mass a source of irritation and causing the inflammation of the acne pustule. Hairs are also often found coiled up in the plugs and are sometimes quite long. I am inclined to think these hairs are quite a frequent cause of acne.

The internal causes are quite as important as the local and foremost among them stands the condition peculiar to the changes which take place at puberty. At puberty all the glands of the body take on a new development. This is the case with the sebacious glands of the skin. The secretion becomes thickened and is not so easily exuded from the gland ducts; consequently they become clogged and this accumulation of sebum causes pressure on the surrounding parts and as a result we get the disturbance in circulation followed by inflammation, and if allowed to go on, pus formation.

Disturbance of digestion or of the genito-urinary organs may be found in many cases of acne. Dyspepsia, constipation, uterine disorders, or abuse of sexual function can usually be discovered.

DIAGNOSIS—As to the diagnosis of acne, it is recognized at a glance. The only disease with which it is liable to be confounded is papulo-pustular syphilide. It might be mistaken, however, for the different drug eruptions and occasionally for eczema.

TREATMENT—The treatment of acne is of two sorts,—constitutional and local. In order to treat a case of acne with any hope of success whatever, we must first ascertain the cause or causes which have operated to bring it about. The foundation of the successful treatment of acne lies in the knowledge of its etiology. The patient should be examined regarding every organ and every function. The habits of life, the surroundings, the occupation of the patient, should all be known to the physician, who should also study the case well to discover, if possible, what is the exact cause or groups of causes, of which the acne eruption is the expression and result. Without this, little can be hoped for. If the physician cannot or will not take the time and trouble to enter into the patient's case with that persevering thoroughness which is indispensable, he had better let it alone.

It should be the aim of the physician to prevent the appearance of new lesions. If there is anemia, tonics are required, among which iron and arsenic are the most prominent. If the uterine functions are not regularly performed, these must be regulated. If dyspepsia exists, this must be combated by diet and remedies appropriate to the condition. Constipation is a frequent concomitant and its removal is necessary to a cure. If constipation exists salines or vegetable laxatives should be prescribed in sufficient quantities to open the bowels once or twice a day. An occasional mercurial may be prescribed in some cases, and it is a very good plan to start out with a little calomel followed by salines where there is constipation and a coated tongue.

The constitutional treatment is of the utmost importance and there are no two cases that can be treated alike, although of late I have been giving about the same treatment locally, which is as follows: I have the patient steam the face thoroughly every night and then squeeze out all black-heads possible, if there are any pustules, incise, remove contents, and apply bichloride (4 to 5 grains to the ounce), not all over the face, but simply to the pustules that have been opened. Before retiring I have them apply a sulphur wash which is allowed to dry on and remain over night. I usually require patients to come to the office once or twice a week for a time in order that I may open all pustules and papules, as they will not do it thoroughly enough themselves. I also use the high frequency current from 10 to 30 minutes once or twice a week. This outlines the treatment that I have used almost exclusively for the past few months, in which time I have treated at least 25 or 30 cases and with better results than I have ever obtained before. There are, however, innumerable remedies in our text-books for the treatment of acne; such as resorcin, boracic acid, zinc sulphate, ichthyol, etc., etc. I will say, however, that the X-ray is of great benefit in many cases. I have treated cases, however, with the high frequent current with the most happy results, that did not yield to the X-ray.

MANUAL OF THE DISEASES OF THE EYE. For students and general practitioners by Charles H. May, M. D., Chief of Clinic and Instructor on Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903; Ophthalmic Surgeon to the City Hospitals, Randall's Island, New York; Consulting Ophthalmologist to the French Hospital and to the Red Cross Hospital, New York; Adjunct Ophthalmic Surgeon to Mt. Sini Hospital, New York, etc. Fourth edition, revised. Wm. Wood & Company, New York.

This fourth edition has been carefully revised and a considerable number of altercations have been made. Some of the former illustrations have been replaced by superior ones. New figures have been added, including eight additional colored plates; among the latter are six presenting twenty-nine colored drawings of external diseases of the eye.

This little volume has been kept up-to-date without increasing its size. The original plan of presenting a book for the student and general practitioner has been adhered to .

A NEW HEMORRHOIDAL CLAMP.

BY E. A. HAMILTON, M. D.,

Lecturer on Diseases of Rectum and Rectal Surgeon to Prostestant Hospital, Columbus, Ohio.

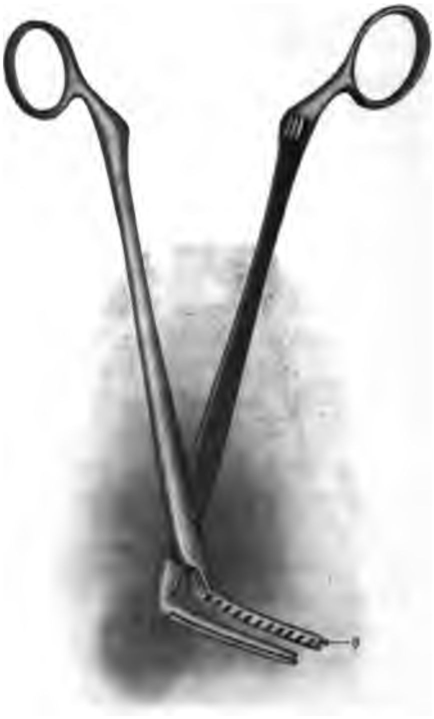
There are some objections to the usually accepted methods of operating on hemorrhoids. In the clamp and cautery operation the vitality of the seared stump has been destroyed by pressure of the clamp blades. This devitalized tissue sloughs and, while the results of this procedure are most excellent, yet the separation of this sloughing area takes time, prolongs the stay of the patient in bed and sometimes causes a great deal of pain and strangury.

The ligation operation is open to the same objections. The tissues grasped by the ligature must separate and cicatrization follows granulation repair. This process is tedious, from three to six weeks being required to form a good cicatrix after either the ligation or clamp and cautery operations. The most eminent names in rectal surgery are behind one or the other of these procedures, or some of their modifications, as the devices of Earl and Martin, but in no other field in surgery's domain are operators satisfied with anything less than union of divided structures by first intention.

It has been thoroughly demonstrated in cases of straight, uncomplicated fistula that such union can be secured. The rectal field is the host of more bacteria than are found in any other accessible area of the body, but as happens in such cases the tissues can, by long continued association with these parasites, successfully cope with them in numbers that would spell disaster in other regions.

The most careful preparation of any operative field cannot secure quick union in tissues whose vitality has been destroyed by crushing. The clamp here presented does away with the tissue which has been clamped and in which sloughing would follow if it was allowed to remain. This clamp consists of slotted blades, two inches in length, the blades being at right angle to the handle.

The under surface of the blades are grooved to a depth even with the upper surface of the slots. This groove is wide enough to exert no pressure of consequence on the base of the tumor. The under surfaces of the blades are rounded to facilitate suturing and the heel of the instrument is properly smoothed off. The upper portion of the clamp blades above the slots and the groove come together with serrated edges which will give as firm grasp of the tissues as is needed.



A—Clamp edge which exerts its pressure outside the line of incision
B—Slot through which the pile tumor is severed.

The use of the instrument is simple. The usual preliminaries of stretching the sphincters and cleansing the field are attended to; the tumors are brought down to suit the operator's convenience; the clamp is applied parallel to the long axis of the gut and with the heel of the instrument toward the center of the anal orifice; proper pressure is made by the clamp blades; sutures are then passed under the instrument, its rounded under surface facilitating this procedure; a blunt-pointed bistoury or thin scalpel is inserted in the slots and the hemorrhoidal area separated thereby. The clamp with the hemorrhoid is removed and the sutures tied. Either continuous or interrupted sutures are used, usually of catgut of a size suited to the exigencies of a given case.

The idea in this instrument is that the lips of the cut surface have not been injured by the crushing of the clamp blades, consequently if proper sterilization of the field has been carried out we may as well expect primary union here as in any part of the body; and if primary union fails to result, there is no sloughing mass which has to be cared for and healing is advanced by just so much.

Some surgeons advise to cut off a hemorrhoidal mass and suture it as we do in any other wound, but there is danger of the incised base of the tumor retracting up into the bowel before sutures can be applied, and sometimes the hemorrhage from such an accident might easily reach the danger point. The operation with this clamp has all the advantages of clean cut surgery and brings the field of operation always under the operator's control.

Curts, Norris & Co., 31 West Mound street, made the instrument.

JACKSON ON THE SKIN. A ready reference hand-book on diseases of the skin. By George Thomas Jackson, M. D. Chief of Clinic Instructor in Dermatology, College of Physicians and Surgeons (Columbia University), New York. Fifth edition, enlarged and thoroughly revised. In one 12mo volume of 676 pages, with 91 engravings and three colored plates. Cloth, $2.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

The great value of this new (5th) edition lies in the clearness of its symptomatology and diagnosis, and the excellent judgment used in its therapeutic recommendations. The demand for five large editions is ample evidence of the popularity of the book. The present revision has been particularly searching, and the subject matter has been brought up to date.

THE PROCTOSCOPE AND COLONOSCOPE IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE LARGE INTESTINES.

BY WELLS TEACHNOR, M. D., COLUMBUS, OHIO.

The proctoscope and colonoscope are tubular specula designed for the purpose of viewing the interior of the rectum signomid and descending colon. The essential adjuncts for their proper application are the Sims or knee-chest posture for which especially devised tables have been constructed for the purpose of making the patient comfortable in this position for prolonged examination and operation. This, however, is not absolutely necessary, as the patient can assume the posture on any solid, flat table for sufficient length of time for ordinary examination. Ballooning of the rectum by atmospheric pressure. This merely requires under normal conditions of the rectum the removal of the obturator from the scope after it has been introduced a sufficient distance to clear the sphincter muscles, and light to illuminate the now smooth and cylindrical canal. This may be either natural or artificial in a majority of rectal cases, the former if it can be received in generous quantities will be found quite satisfactory, but for high examination reflected artificial light from a head mirror or an electric light contained in the instrument with battery attachment which gives a general illumination of the gut, will be found absolutely necessary. In the absence of either one of these agents a successful examination will be out of the question. Their development was the result of the principle demonstrated by J. Marion Sims, in 1845, that a hollow viscera would inflate by atmospheric pressure if the orifice was open at a time when the hips were elevated above the chest. Many surgeons of note took this suggestion and began to make application of the same principle in the examination and treatment of the rectum. As a result, many instruments of this character were devised which gave very satisfactory results in examination of this organ, but it remained for Howard Kelley to systematize the method and arrange a complete outfit of tubular instruments. His efforts cleared the way and established a rational method of intestinal investigation. By their means, accurate diagnosis and exact location of the disease within the canal can be readily made. In fact, their perfection has established a new era in diagnosis of intestinal diseases, and has made possible a rational method of local treatment which is far superior to the older methods of irrigation and sounding without the sense of vision. He, therefore, may be rightly called the father of proctoscopy, and due credit should be given for his efforts in this line.

Prior to the introduction of these instruments, exploration of the upper rectum and colon for the purpose of diagnosing and treating disease was practically an unheard of procedure. The rectal speculum which gives a limited view of the first three or four inches of the bowel was the only means in our possession for making such investigation. However, a great variety of specula were devised. There are by-valves, conical and fenstrated, all serving their purpose in a circumscribed way. Their construction does not conform to anatomical relations of the part, and their introduction and manipulation are so painful that examination by this means has become so unpopular that a great indifference is shown by the physician to individuals suffering from disease of this region, and at the same time the patient receives the impression that such examination means pain, and often defers treatment until disease, oftentimes readily curable, does irreparable damage.

The construction of the proctoscope being complete it was not long, however, until the fact became known that under certain conditions as chronic inflammation of the mucus membrane and hypertrophy of the rectal valve, the gut would fail to inflate to a degree sufficient to make vision perfect. This lead to the construction of a pneumatic attachment, which consists of a cap fitting over the end of the scope after the obdurator has been withdrawn, when it is evident that the gut will not dilate sufficient for inspection. The cap not only prevents the escape of air, but affords means for inspection at the same time. An ordinary hand bulb is used to pump air into the bowel, or if it should be convenient, the cut-off of a compressed air tank can be attached to the cap in an opening made for the purpose, when the air can be turned on in sufficient quantities for complete dilitation. By this means, intractable cases can be overcome and much higher examination can be made than by natural inflation. With a thirteen-inch scope under high pressure, about eighteen inches of the large bowel can be inspected; beyond this, the instrument will impinge either on the liver or the diaphragm. In connection with this procedure just described, it requires not only practice and a knowledge of the normal anatomy of the part, but tact, in order to bring out the diagnostic value of these instruments. Rectal examinations are decidedly unpopular at the best, so it is necessary to make a complete and successful examination to have the utmost confidence of the patient. The bowels should be cleaned by a cathartic followed by an enema just before the examination. An unnecessary display of instruments before the examination is liable to have a bad effect on the patient. While they are neither formidable or grewsome, it is hard for the patient to understand that their use will cause little exposure and no pain in the absence of active ulceration in the anal region, such as ulcerated hemerrhoid and fissure.

I have had patients say to me that the introduction of such an instrument would be impossible. In a well-appointed examination, there should be no exposure except the interior of the rectum, therefore, your future connection with the case depends largly upon your tact in bringing about such an examination when required and your skill in conducting it without pain or exposure. Of all the essentials for examinations for disease, that of the sense of vision is the most certain method of acquiring the exact nature and location. Many of the local diseases that come under the eye when the anus is exposed to inspection as a patulos condition of the orifice or a pathological discharge are expressions of disease higher in the intestinal canal and should immediately demand a thorough exploration with the colonoscope. I believe the rectum should come in for an examination in all chronic disorders of the intestinal canal whether the symptoms point directly to it or not. To be accurate, the physician must first familiarize himself with the normal appearance of the mucus membrane. He must be able to distinguish between the normal livid color of the anal mucus membrane and the pale anemic appearance of the membrane in the upper chambers in chronic inflammation. When this is accomplished the inflammatory conditions so often affecting the large intestines can be easily observed and made accessible to treatment by placing the instrument in the bowel and observing the mucus membrane as the instrument is slowly withdrawn. In this manner, the entire rectal mucus membrane can be inspected, and at the same time, should disease demand it, topical applications or irrigations can be carried out. Their value in diagnosis and treatment of disease lies in the fact that they offer the best means of intestinal inflation and irrigation as heretofore described. By this means the amount of air can be regulated according to the feelings of the patient, and is not haphazard as by the means of introducing effervescing solutions in the bowels. By this means, we can readily observe the inflammatory conditions which form by far the greatest number of intestinal diseases. Chronic proctitis with all its characteristic symptoms and variety of causes carefully summed up can not be accurately diagnosed as to its limits in the intestines or to the degree of inflammation, without the use of the proctoscope. By this means the entire mucus membrane of the rectum can be inspected and at the same time appropriate treatment can be applied either topically or better by the aid of a spray or irrigation with solutions which experience and knowledge have taught to be most beneficial in relieving this condition. As we ascend the intestinal canal, we next come in contact with probably the most important portion of the large intestines, from a standpoint of both the physician and the surgeon, the sigmoid colon, which the procto-colonoscope has made accessible to occular examination. This portion of the canal is made the receptacle of all the hard fecal accumulations, which not infrequently gives rise to ulceration and inflammation. Sigmoiditis in our text-books receives but casual mention, but recent investigation has shown it to be quite frequently the seat of serious inflammatory disease, Mathews has detailed quite a large number of cases in his text-book, showing that it is frequently the seat of both inflammatory and malignant disease. Here nature has made a wise provision in the wide range of mobility given this segment. It is here the fecal mass is molded, and if for any reason defecation is deferred by neglect or inconvenience the gut becomes insensible to its presence and after a short time the mass rapidly loses its watery elements and leaves the gut full of hard and dry fecal masses, which can be easily understood how injury followed by ulceration could be produced if the sigmoid was in a more fixed position, but the unusually long meso-sigmoid gives it a wider range of motion. It is just as liable to be found in the right as iliac left fossa, therefore, pain and tenderness in the left iliac region does not necessarily signify that it comes from the sigmoid. The rectum and lower part of the colon is a seat of a large variety of tumors, both benign and malignant. Fortunately, the majority are situated in the extreme lower limits of the rectum and surrounding structure and require nothing more than palpation by the finger to make a diagnosis. They are all considered under the general term polypus, which means a pedunculated tumor hanging from the rectal wall. Of a large number of tumors in this region, there is but one that especially concerns us in the use of the proto-colonoscope and that is multiple adenomata. They occur most frequently in the upper rectum and colon of adults, and their size, character, and distribution can only be determined by the use of these instruments. Their treatment is purely surgical and can only be carried out by instrumental procedure, through the long tubular specula; by this means, they can be severally picked up by long forceps either ligated, cut or twisted off, and the stump touched with a point of a cautery. The diarrhea and hemorrhage that accompany this affection can be controlled by topic applications and stringent irrigations by the same method. While their treatment is at times unsatisfactory and intractable as they have a tendency to become malignant, this method has been the means of prolonging many lives and saved many an individual from carrying a horrible artificial anus. As a diagnostic aid in obstruction of the bowels after a collection of all the symptoms both objective and subjective inflation by air will not only give the exact location of the obstruction, but will immediately show in what portion of the intestine it exists, and will reveal oftentimes the nature of such obstruction, whether neoplasm an inflammatory stenosis, impaction of feces and enteroliths, the latter being readily overcome in many instances by inflation and distention of the gut with water. All cases of intusussseption should be submitted to this mode of treatment before operation. Volvulus or twisting of the intestines can often be relieved when diagnosis is made early by this simple and uncomplicated method. Stricture, one of the most serious conditions to be diagnosed and treated in the intestinal canal, can be readily made by inflation. While they do not at all times endanger life, they produce other constitutional disturbances which eventually produce grave conditions.

Hemorrhage from the rectum is usually the result of some imperfect operative measure, but may be due to traumatism from the passage of a hard fecal motion or tearing of the mucus membrane by foreign bodies in the fecal mass, or from ulceration of malignant growths. Any of these may be sufficient to demand immediate surgical interference. The methods of plugging for arrestation described and advocated by some of the distinguished surgeons in this line to my mind are not only unscientific and unsurgical, but are hard to accomplish even in the hands of an expert.

After the plug is put in position to control the hemorrhage it can only act as a foreign body and is liable to cause more damage by their removal than the good they have accomplished. Imagine a plug made of gauze five inches in circumference saturated with persulphate of iron placed in the rectum in comparison with the simple method of introducing the protoscope, rapidly irrigating the bowel with hot saline or mercuric solution, cleaning it of debris, bringing the bleeding point or points directly under the eye, where they can be seized with compression forceps and either ligated or touched with the cautery point. If the hemorrhage comes from a large area, as from a malignant growth, it can be brought directly within the scope until sufficient compression has been made to control it.

Since recent investigations have shown intestinal displacement or enteroptosis to give rise to pathological conditions, especially in the colon, the colonoscope has been a valuable aid to both the surgeon and general practitioner as a means of diagnosis. By the use of this instrument, a correct diagnosis, provided the diagnostician first has a thorough knowledge of the normal reginal anatomy can always be made in displacement of the transverse colon sigmoid flexure and probably of the cecum. The cecum ascending and descending colon are the least movable, while the transverse colon sigmoid and upper rectum are freely movable and may give rise to a wide diversity of position. It is in these segments that we naturally look for displacement. They occur most frequently in women and may frequently exist for a long time without giving rise to any serious symptoms. The intestines should always be distended when in doubt of anatomical position, before any operative procedure is undertaken, either on the intestines or the adjacent organs. The rectum and large intestine, especially the flexures of the colon are frequently the seat of both specific and simple ulceration. The specific class includes syphilitic tubercular and dysenteric. Simple ulceration is usually the result of traumatism from operative work, and in women from the passage of the fetal head during parturition. Probably the most frequent cause is the passage of foreign bodies, and the retention of hard fecal accumulation in flexures of the colon, as most of the ulcers are located in this portion of the intestines.

Local treatment in connection with a suitable diet and proper constitutional treatment in the specific form offer the best and quickest means for their relief. In this connection, the protocolonoscope renders valuable aid. The ulcer can be brought into view and curetted or receive a topical application that may be indicated. Chronic colitus can be irrigated and in the majority of cases rapidly brought under subjection. They have become a recognized factor in the mechanical and surgical treatment of constipation and obstipation. Constipation arises from a large number of causes, both functional and mechanical. Therefore, it requires a great variety of methods of treatment to overcome it. In a majority of instances, it is the result of deficient normal secretion either in the intestinal canal itself or the adjacent auxilliary organs of digestion, which discharge their products of secretion into the alimentary canal. It is the presence of these secretions in the canal of the gut having its normal tonic power, together with the products to be digested, that produces the stimulation of the nervous mechanism to excite the normal peristaltic action which is necessary to propel the fecal contents. On the other hand, we have the mechanical causes which produce the true obstipation that may occur in any portion of the large bowel. They may be the result of adhesions to adjacent organs, and from angulations due to displace segments of the bowels or from tumors outside the intestinal canal. Since it has been shown that the rectal valve permanently exists in the rectal canal and has a structure that when abnormally developed by means of their anatomic coarctation or from infiltration in the presence of chronic rectitis they offer an obstruction to the descent of the fecal mass, the protoscope has become a valuable aid, as the condition can neither be recognized or remedied without it. The relief afforded by incising these valves when they are actually obstructed is a great benefaction to the individual, but to be able to say when they demand incision is quite a doubtful question. Admitting that the condition exists and that the operation of valvotomy either by incision or pressure necrosis gives permanent relief from obstipation, yet I am unable to say from any symptom or combination of symptoms when an operation will give relief. I believe it a justifiable operation in the presence of chronic rectitus, where the valve is rigid to the extent the examining hook will not slip off from its own weight when placed over the free margin in an individual showing all the symptoms of autointoxication. The benefits derived from this operation are due largely to the increased drainage afforded. The fecal contents on entering the rectum immediately advance to such a degree that the nervous mechanism of defectation is irritated to such an extent that defecation can not be deferred.

Obstruction to the passage of the fecal mass in the large intestine bears the same relation to the human economy that an obstructed sewer does to the community it is supposed to drain. In this connection, I want to say a word in regard to the so-called "habit cases" with which I have had some recent experiences. In every case that I have had occasion to observe, the upper rectum and sigmoid was the seat of a subacute inflammation. The bowels were constipated, the fecal mass was broken into hard balls covered with a glary, tenacious mucus often streaked with blood. I am unable to say whether this is a condition resulting from constipation or the pathological basis for the establishment of the habit. In any event, I believe the draining of the upper rectum and sigmoid a necessary adjunct to the successful treatment of many of these cases. It has been but a few years since stretching of the sphincter and cauterizing the mucus membrane was a recognized method of treatment. I would suggest to those dealing with such cases that they go higher in the intestinal canal with those cases showing a tendency to recut and remedy the condition that the colonoscope will reveal.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, October 2, 1905.

F. F. LAWRENCE, President. CHAS. J. SHEPARD, Secretary.

Members present, fifty-three; visitors, nine. Cases were reported by Dr. Carter.

Dr. J. D. Dunham read a paper on "Catarrh of the Stomach." Discussion by Drs. Rankin and Dunham. Dr. E. J. Emerick read a paper on "Acne Vulgaris." Discussion by Drs. Probst, Thomas and Shepard. Dr. W. J. Means read a paper on "Some Observations on Asepsis in General Surgery." Discussion by Drs. Hoover, Leach, Shook, Goodman, Wardlow and Barnhill.

Drs. James Price, of this city, E. L. Carlton, of Canal Winchester, and D. D. Mosier, of Brice, were elected to membership in the Academy.

The Columbus Academy of Medicine held a special meeting, followed by a banquet at the Neil House, Saturday evening, October 14, 1905, at which Drs. Frank Billings, ex-President of the American Medical Association, and J. B. Murphy, Professor of Surgery at Northwestern University, were present and addressed the Academy respectively on "Diseases of the Stomach from the View-Point of the Physician," and "Surgical Treatment of Non-Malignant Diseases of the Stomach." Dr. Billings reviewed briefly the functions of the stomach and described in detail the causation of many of the leading forms of diseases of the stomach. Dr. Murphy described the development of stasis and resulting gastrectasia and recommended gastro enterostomy in chronic cases of this character. We hope to publish these interesting addresses in our next issue.

The attendance at this meeting was very gratifying, there being many out-of-town members of the profession present, among them Drs. W. H. Christopher, London; John S. Moore,

South Charleston; C. L. Minor, Springfield; A. J. Strain, London; M. J. Jenkins, Plain City; J. W. Means, Troy; L. McKittrick, Dublin; D. A. Berndt, Portsmouth; J. S. Raedin, Portsmouth; A. S. Beckwith, London; H. T. Sutton, Zanesville; Chas. P. King, Newark; R. J. Morgan, Van Wert; W. E. Barr, London; M. B. Wilson, Lafayette; G. B. Nessley, Grove City; J. E. Sylvester, Wellston; S. C. Lanimore, Mt. Vernon; I. P. Seiler, Piketon, and S. S. Halderman, Portsmouth.

ADAMS COUNTY MEDICAL SOCIETY.—The Adams County Medical Society held a meeting, October 25, 1905, at West Union, Ohio. The following papers were read: "Veratrum Viride," Dr. R. A. Stephenson, of Manchester, Ohio; "Scarlet Fever," Dr. J. M. Lockhart, of Ecksmanville, Ohio; "Management of Miscarriage," Dr. R. B. Shelton, of Manchester, Ohio; "The Action of Antitoxins," Dr. J. E. Rogers, of Peebles, Ohio.

TENTH DISTRICT MEDICAL ASSOCIATION.—The Tenth District Medical Association held its second annual meeting, October 5, 1905, at London, Ohio, under the presidency of Dr. William B. Hedges, of Delaware. Papers were read by the following: Drs. J. H. J. Upham and J. J. Coons, Columbus, Ohio, "Leukemia, with Demonstrations of Blood Slides"; Dr. Charles A. L. Reed, Cincinnati, Ohio, "The After-Treatment of Gastroenterostomy"; Dr. C. D. Mills, Marysville, Ohio, "The Predisposing and Acquired Characteristics of the Alcohol and Drug Habitue"; Dr. J. F. Baldwin, Columbus, Ohio, "Surgical Tuberculosis"; Dr. Charles S. Hamilton, Columbus, Ohio, "Appendicitis," and Dr. M. J. Jenkins, Plain City, Ohio, "Skin Diseases of Infancy and Childhood."

The local profession provided a dinner followed by a smoker at the Dayton Club Rooms. The attendance was large and the meeting was pronounced by all a success. The papers were valuable and the discussion generous. Among the Columbus physicians in attendance, besides those on the program, were Drs. J. W. Clemmer, W. D. Deuschle, P. D. Shriner, L. Woodruff, J. U. Barnhill, T. W. Rankin, T. E. Courtwright, Starling Loving, Frank Winders, E. J. Wilson, Vander Veer Taylor, J. D. Dunham, J. H. J. Evans, G. S. Stein, W. H. Sharp, Yeatman Wardlow, M. E. Blackburn, Ida Wilson and Grace Welch.

The following officers were elected: President, Dr. Albert J. Strain, London; Vice-Presidents, Drs. W. Stanley Samson, Lancaster; Jefferson B. Scearce, Chillicothe, and Anson S. Beckwith, London; and Secretary and Treasurer, Dr. John H. J. Upham, Columbus. The next session of the association will be held in Lancaster.

MIAMI VALLEY MEDICAL SOCIETY.—The fifty-sixth annual meeting of the Miami Valley Medical Society was held, October 10, 1905, at Loveland, Ohio. Papers were read by the following physicians: F. H. Leever, M. D., Loveland, Ohio, "Some Cases of Appendicitis"; R. T. Trimble, M. D., New Vienna, Ohio, "Some Case Reports"; T. L. Cooksey, M. D., Wilmington, Ohio, "Puerperal Eclampsia"; S. B. Lightner, M. D., Sabina, Ohio, "Typhoid Fever"; J. C. Larkin, M. D., Hillsboro, Ohio, "The Prevalence, Pathology and Prevention of Gonorrhea"; and Wm. Scott, M. D., Loveland, Ohio, "Some Mistakes in Appendicitis."

HIGHLAND COUNTY MEDICAL SOCIETY.—The Highland County Medical Society held a meeting, October 4, 1905, at Hillsboro, Ohio. The following papers were read: "Yellow Professionalism," Dr. Frank Smith, West Union, Ohio; "The County Medical Society," Dr. J. C. Larkin, Hillsboro, Ohio.

SENECA COUNTY MEDICAL SOCIETY.—The regular meeting of the Seneca County Medical Society was held, October 19, 1905, at which papers were read by the following: "Neurasthenia," R. B. Leister; "Digitalis," C. M. Comer; "Dysmenorrhea," M. Ubberoth.

CANTON MEDICAL SOCIETY.—The second quarterly meeting of the Canton Medical Society was held, October 6, 1905. R. E. Skeel, M. D., of Cleveland, Ohio, lectured on "Acute Appendicitis and Its Complications from a Clinical Standpoint."

THE COLUMBUS MEDICAL JOURNAL.

A MONTHLY MAGAZINE OF MEDICINE AND SURGERY.

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NOVEMBER, 1905.

Editorial.

ASEPTIC SURGERY IN WAR.

The war between Russia and Japan is the first in history in which aseptic methods have been extensively applied. The medical records, therefore, of that war are of great interest. It is generally understood that the results of the treatment of gunshot wounds were very satisfactory. The application of aseptic methods illustrates the disposition of the Japanese to avail themselves of the best that can be learned from other people. Realizing that absolute cleanliness is essential the Japanese took every possible precaution in the way of frequent bathing and the wearing of clean attire. They seem to have cultivated the aseptic conscience of the entire army. To Dr. Suzuki, the Surgeon General of the Imperial Japanese Navy, is due much of the credit for the excellent results secured. "In anticipation of the recent war," he says, "preparations were made before the commencement of hostilities by the selection of surgeons who were familiar with aseptic methods of treatment and who were known to be conservative. No antiseptics whatever were employed. Wounds were thoroughly cleansed with sterilized water. and dressed with sterilized cotton."

In most instances no attempt was made to probe the wound for the bullet or fragment of shell. Healing is said to have occurred with remarkable facility. Complicated or hazardous operations were not attempted on the battlefield. The bullets and shells used were aseptic; hence very little effort was made to dislodge them at the time of the first dressing. Later, with patients in better condition, bullets or pieces of shell were removed under circumstances the most favorable for the proper healing of the operative wound. In the few instances in which wounds suppurated it was found that fragments of cloth had been carried into the tissues and in such cases the wounds were reopened and the offending material removed.

The excellent results secured are illustrated by the fact that in one hospital with six hundred and eighty wounded soldiers only thirty-two were lost.

SCOPOLAMINE ANESTHESIA.

Much has been written recently in regard to the use of scopolamine as an anesthetic. Two principal uses are made of it, one, in small doses administered hypodermically a short time before operation with a view of securing partial analgesia and unconsciousness so as to obviate the unpleasant effects of the inhalation anesthetic which may be given in less quantity, and the other with a view of securing complete anesthesia without the use of ether, chloroform or other gaseous anesthetic. For the former purpose it is administered in one-hundredth grain a half hour before operation (Hastog), or in three one-fiftieth grain doses at one hour or half-hour intervals before operation, each accompanied with an eighth of a grain of morphine. When used for this purpose it is found that there is practically no stage of excitement, that it takes only about half the usual quantity of the latter, and that there is no vomiting or nausea as the patient comes out from under the anesthetic. When used to replace ether or chloroform it is given in considerably larger doses, one-twenty-fourth to one-fiftieth being administered two and one-half hours before operation, the same quantity one and one-half hours before and again one-half hour before the time for operation. Each of these doses is accompanied by an eighth of a grain of morphine. With this quantity the patient usually falls into a quiet sleep one-half hour after the administration of the first dose and is scarcely aware of the administration of the second; the third injection is given to insure complete unconsciousness.

Much has been said in reference to the dangers in administering the drug in the large doses thus indicated. Dr. Shoemaker, of Philadelphia, calls attention of physicians to the dangerous toxic properties of the preparation. He claims from experiments made that even in small quantities, one-two-hundredth to one-one-hundredth grain, its effects are sometimes alarming; that it produces excessive vertigo with a dryness of the throat; and that in large doses it may be attended with grave dangers to the patient. While another authority says that scopolamine has "fewer disadvantages and dangers than any of the general anesthetics heretofore introduced." The same authority, speaking of the use of scopolamine as a substitute for the general anesthetic, says that "it has after-effects much less disagreeable than any of the other anesthetics; that it seems to be perfectly safe, and that it rarely needs to be reinforced by chloroform or ether. The patient goes quietly to sleep in bed and generally sleeps about five hours, awakening as from a deep natural sleep, or with but slight confusion."

The author has used it with most gratifying results in the large doses, namely one-twenty-fourth of a grain of scopolamine and one-eighth of a grain of morphine two and one-half hours before operation, the same or slightly smaller dose one and one-half hours before operation and the third dose same as the first one-half hour before operation. Unconsciousness was complete. The operation was begun without any other anesthetic, but as the patient made a slight demonstration, that is, there was some twitching of the muscles of the face,, grimace, etc. A small quantity of anesthol was administered to make doubly sure that the patient should not suffer. The patient was calm throughout the operation, the respiration and heart action regular, pulse full and strong throughout. In this instance the operation was for osteomyeolitis following injury of the frontal bone, necessitating the cutting away of the outer plate over a large area and the removal of a large sequestrum, an inch and a half in length, of the inner table of the bone. There was less disturbance of pulse and respiration than obtains in the administration of ether or chloroform. The patient awoke three hours after the operation as if from a natural sleep, with no nausea or vomiting, without thirst or headache. He says that he was aware of but one hypodermic injection, and had no knowledge whatever that an operation had been performed.

We anticipate that for selected cases this means of anesthesia will be found to have decided advantages, being particularly suitable for cases with kidney or pulmonary involvement, for those who have great dread of the inhalation anesthetic and for cases requiring operation about the face and mouth. The form of the drug is scopolamine hydrobomate, derived from scopolia atropoides and other solanacious plants.

EFFICIENCY OF AMERICAN MEDICAL COLLEGES.

No doubt American medical colleges and American hospitals are providing instruction in medicine and surgery which compares favorably with that furnished in centers of medical education in Europe. It is a matter of frequent remark by those who have witnessed many of the leading clinics of the world that nothing better can be found than is provided in many of the American colleges. American teachers are, in increasing numbers, commanding the respect of the leading educational institutions of the old world, as is evidenced by the increasing number of honorary degrees conferred upon them by those institutions. Among the recipients of such degrees within recent years are W. S. Halsted, Howard A. Kelly, J. Collins Warren, W. J. Mayo, W. W. Keen, and others.

Few men have a better opportunity of comparing the medical colleges of the various countries than Dr. Nicholas Senn, who is credited with saying, recently, as quoted in the *Medical Age,* "that at the present time it is not necessary for the medical student to go to Europe to complete his medical education." He says that with the rapid increase of our population, and national as well as individual wealth, our medical schools have gradually raised the requirements of admission, lengthened the time of college attendance, equipped laboratories, secured adequate clinical facilities and initiated a vigorous final examination, until some of our leading schools, like the Harvard Medical School, the College of Physicians and Surgeons of New York, the University of Pennsylvania, the Johns Hopkins Medical School, and Rush Medical College, Chicago, compare well with any of the European schools. Fortunately, the elective system in teaching, so common in Europe, has found but little favor in this country. It can be safely stated that didactic teaching by lectures, recitations, demonstrations, and laboratory work is carried on in a more thorough and systematic manner in this country than anywhere else. We have hospitals for clinical teaching in our large cities which in the near future are destined to overshadow the famous clinical institutions of the Old World. Our students waste no time in beer gardens and the field of honor. They come to our medical schools with a firm determination to master the principles and practice of their chosen profession as thoroughly as possible during their pupilage, and apply themselves to the task with zeal and devotion. The numerous hospitals that are springing up in all of our large cities secure for a good percentage of our graduates appointments as internes, where they are given the best possible advantages for a successful post-graduate practical training. There is no longer any need for our students to cross the Atlantic for the purpose of studying medicine. A comparison between an equal number of recent graduates from our high requirement medical schools and those of Europe would unquestionably result in favor of the former. The American is intensely practical in everything he undertakes, and our methods of teaching medicine constitute no exception."

Besides this it is to be observed that the medical centers where the best work is being done for post-graduates are not the best places for the education of the average medical student. The smaller medical college with its smaller clinical amphitheatre has decided advantages. The personal contact with the teachers and the opportunity of close observation at the clinics are advantages for which the large clinic has no adequate substitute for the average medical student. The medical course now includes many sciences which are best taught in the laboratory and the detail of clinical teaching in the junior and senior years can be most effectively carried out with small classes or with classes in sections. And under such circumstances students have an opportunity of learning much in reference to the care of the patients and the peculiar circumstances which surround them in an environment most like that in which they themselves will in all probability begin practice.

BOARD OF HEALTH BULLETIN FOR THE MONTH OF SEPTEMBER, 1905.

Fewer deaths occurred during the month of September, 1905, than during the corresponding month of any year for the past ten years. One hundred and fourteen death certificates were filed at the Health Office, against 161 in September, 1904. Three deaths occurred from typhoid fever; 1 from whooping cough; 1 from diphtheria; 21 from tuberculosis; 6 from cancer; 12 from organic heart disease; 6 from pneumonia; 8 from cholera infantum; 4 from suicide; 4 from accidental violence; and 41 from all other causes combined. Seventeen died under 1 year of age; 5 between the ages of 1 to 5; 2 between 5 and 10; 7 between 10 and 20; 9 between 20 and 30; 16 between 30 and 40; 21 between 40 and 50; 10 between 50 and 60; 12 between 60 and 70; and 15 over 70. Throughout an entire year, tuberculosis always heads the death list, but a few months of winter and early spring, pneumonia reigns king of diseases. Seven per cent. of the total number of deaths for 1904 was caused by pneumonia. While pneumonia is caused by a germ, there must be a deviation from the normal standard of health, before the germ can gain mastery and cause the disease. The question of right living enters into the prophylactics of pneumonia more largely than any other factor.

The sputum of pneumonia patients should be as carefully disinfected and cared for as the sputum of tuberculous patients. Too much stress cannot be placed upon this precaution. Drunkenness predisposes the individual to this disease. The congested mucous membranes of the drunkard or even the moderate drinker has much less power to resist the invasion of these germs than the healthy normal mucous membrane of the abstainer. Tobacco also irritates the mucous membranes, and when used in excess adds a weakened heart, to disturb the circulation, and offers an inviting field to the ever-present germs. Over-eating disturbs digestion and circulation and overtaxes the organs which disposes of waste material. The harmful waste products being in part retained, the body passes below the normal standard of health and offers a fertile field for disease. The living rooms should not be overheated—never over 70 degrees, Fahrenheit, and always well ventilated. Overheated, illy-ventilated living and sleeping rooms always predisposes one to colds. Colds produce congested mucous membrane and a congested mucous membrane predisposes to pneumonia.

(Signed) McKENDREE SMITH.

THE COLUMBUS HEALTH DEPARTMENT.

That great improvement has taken place in the work of the Health Department of this city is a matter of common observation. The profession can point with pride to the results that have been secured under the wise supervision of our present health officer, Dr. McKendree Smith, and the able corps of assistants in the Health Department.

Within the last two years important positions have been created in the Health Department and the Board of Health has been fortunate in securing efficient men for these places. One of the most important of these new positions is that of Medical Inspector, whose duty it is to carry out the rules of the Board of Health governing the management and quarantine of contagious diseases, under the supervision of the health officer. Under these arrangements there has been a great saving to the city in life and health, while the salary of the inspector has not amounted to as much in the last year as it cost the city to pay for a special small-pox physician to care for small-pox alone. By having an officer whose special duty it is to look after contagious diseases their spread has been greatly curtailed. Three years ago we had in the city 382 cases of small-pox with 52 deaths, two years ago we had 112 cases with no deaths, and within the last nine months, ending October 31, we have had only 10 cases with one death. At the present time the city is entirely free from small-pox.

The work of the department was extended and rendered more effective by the cooperation of the Board of Public Service, in furnishing the means for having the city's water supply more carefully examined and protected. Careful bacteriological examinations of the water supply of the city have, under this arrangement, been made at regular intervals during the last year with most gratifying results, as shown in the record of our typhoid fever cases.

For the year 1903 we had 196 cases of typhoid fever with 46 deaths, for 1904 we had 1863 cases with 196 deaths, and for the nine months of the present year we have 866 cases with 98 deaths. This marked improvement in the public health has been favorably commented upon by our citizens and visitors. An additional factor in the purification of our water supply was the cooperation of the Board of Public Service in extending inspection over the water shed of contributing streams. Through the enlightened policy of this board, appropriation was made for a thorough inspection of the streams and water shed for a distance of twenty miles, under the direct supervision of the health officer of the city. The Board of Public Service deserves credit for the wise expenditure which they made for this inspection.

The Board of Health has, by the application of the merit system and the appointment of employes under competitive examination secured efficient men to fill the various positions under their jurisdiction. The meat inspector and the milk and dairy inspector are both graduates of the College of Veterinary Medicine of the Ohio State University and are both active in bringing the work of their departments up to the highest possible standard. The Plumbing Department has received more attention in the last few years than ever before and during the last six months most efficient work has been done in this important department. Without attempting to give a full report of the work done in the various departments the following figures illustrate the increase of work and improved results of the last two years over that of the years just preceding:

	1900	1901	1902	1903	1904	1905 9 mos
Contagious Diseases.						
Small-pox cases	26	22	119	382	112	10
Typhoid fever cases	221	142	146	196	1863	866
Diphtheria cases				60	157	118
Scarlet fever cases				398	113	116
Measles cases				701	517	67
Whooping cough cases				62	71	75
Division of Milk.						
Milk permits issued	324	325	368	313	1018	998
Dairy cows chemically examined	0	0	0	2195	7687	6241
Dairy cows condemned	0	0	0	17	22	14
Dairies inspected	85	70	13	301	478	348

Milk analyses	489	798	478	696	432	518
Retail milk and meat stores inspected	1359	1223	1041	1874	2947	2376
Prosecutions for violating milk rules	0	0	0	3	6	7
Division of Meat.						
Meat permits issued	0	0	0	0	508	869
Animals inspected on hoof before slaughtering	0	0	0	0	32768	30680
Meat condemned, lbs.	1033	523	1626	1143	14742	15026
Slaughter houses inspected	71	69	13	27	314	372
Prosecutions for violating meat rules	0	0	0	0	3	11
Other Departments.						
Vaults cleaned	1477	1407	1404	1354	1570	1368
Nuisances reported	21857	21549	15283	18340	33762	19734

Fees from plumbers and drain layers, meat and milk dealers, 1905, $2,000, a revenue not realized under the former regime.

It will be seen by glancing at this table that three times as many milk permits were issued in the last two years as were issued in the preceeding two years, and this, notwithstanding a milk permit now costs fifty cents each six months whereas prior to that no charge was made. For the first time in the history of the city have the dairy cows been carefully examined by the veterinarian with the view of condemning those unsuited for the dairy. During the last two years 63,448 animals were inspected on hoof before slaughtering, thus insuring wholesome meat for our markets. During the same time 29,768 pounds of meat were condemned as unsuitable for food. Our milk is now inspected with a view of maintaining its standard of fat and the prevention of adulteration. The most perfect methods are also used by the milk inspector in making bacteriological counts of milk samples, thus insuring a reasonable degree of purity of milk.

The milk inspector has kindly placed at our disposal a complete statement of the methods employed by his department in making these tests and counts, but it is too technical to be of general interest to our readers. In time no doubt the bacteriologic test will be very generally carried out since it insures proper care of milk before distribution and prevents long delay after the milk has left the dairy, making it necessary for the dealer to take every possible precaution against fermentation in transit.

Medical News Notes.

Dr. C. P. Linhart has removed to 106 East Broad street.

Dr. Clark Elder has removed to Ohio avenue, near Main street.

The University of Giessen will celebrate the three hundredth centenary of its foundation in May, 1907.

Dr. Herman R. Kauffman, who has recently located at Akron, was in the city visiting friends the week of October 23.

A TUBERCULOSIS LECTURESHIP.—The Iowa State University College of Medicine has established a lectureship on tuberculosis.

Dr. Lewellys F. Barker, successor to Dr. Osler at Johns Hopkins, has been elected president of the Maryland Medical Journal Club.

Dr. James M. Rector, who has been in Chicago for some time past, studying diseases of the stomach with Dr. Kirk, returned to the city October 30, 1905.

AMERICAN ACADEMY OF MEDICINE.—The thirtieth annual meeting of the American Academy of Medicine will be held November 9 and 10, 1905, at the Assembly Hall, Chicago, Ill.

Dr. William Osler, Professor of Medicine at Oxford, has accepted an invitation to deliver a series of lectures on the "Diagnosis of Abdominal Tumors," at St. George's Hospital next spring, as the Thomas Young lecturer in medicine.

The Pike County Medical Society held a regular monthly meeting at Dr. Mooney's office in Piketon on September 4. Dr. Flint Kline, of Portsmouth, read a paper on "Intestinal Fermentation."

The Athens County Medical Society met in the court room, Athens, September 5. D. N. Kinsman, of Columbus, was present and gave a talk on "The Diagnosis and Treatment of Cardiac Diseases."

OHIO VALLEY MEDICAL ASSOCIATION.—The seventh annual meeting of the Ohio Valley Medical Association will be held November 8, 1905, at Henderson, Ky., under the presidency of J. W. Stone of that city. A varied and interesting program has been provided. The evening session will be followed by a banquet.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The thirty-first annual meeting of the Mississippi Valley Medical Association was held October 10-11-12, 1905, at Indianapolis, Indiana, under the presidency of Brunsford Lewis, St. Louis, Missouri. The next meeting will be held at Little Rock, Arkansas. This association meets in a medical and surgical clinic, and occasionally further subdivision has been made on account of the abundance of papers.

Medical Staff Organized.—The board of the Ohio Soldiers' and Sailors' Home, Xenia, has created a consulting and visiting medical staff, which organized October 6 by the election of Dr. Clark M. Galloway, Xenia, as dean, and Dr. A. C. Messenger, Xenia, as secretary. The staff is made up as follows: Dr. Warren C. Hewitt, resident physician. Drs. Frederick Forchheimer, Cincinnati, A. C. Messenger, Xenia, and Clark M. Galloway, Xenia, general medicine. Drs. George W. Crile, Cleveland, William J. Gillette, Toledo, L. E. Russell, Cincinnati, Robert C. Rind, Springfield, James F. Baldwin, Columbus, Samuel S. Wilson, Xenia, Benjamin R. McClelland, Xenia, and Lawrence H. Brundage, Xenia, general and special surgery. Drs. Robert Sattler, Cincinnati, and Pearle R. Madden, Xenia, eye and ear; Dr. Andrew Timberman, Columbus, nose and throat. Dr. Willian T. Corlett, Cleveland, dermatology, and Dr. Henry C. Houston, Urbana, pediatrics.

Recent Medical Books.

THE ERA KEY TO THE U. S. P.—A complete list of the drugs and preparations of the United State Pharmacopœia. Eighth decennial revision (1905). Vest-pocket size; 83 pages; price 25 cents. The Pharmaceutical Era, Publishers, 90 William St., New York.

The book comes in vest-pocket size and gives in a "nut-shell" all the essential information required by the physician who desires to prescribe pharmacopœia remedies—their official names, synonyms and constituent parts, with average doses in both metric and English systems.

AMERICAN MEDICAL DIRECTORY. Published by the American Medical Association.

An accurate and reliable directory of the medical profession is as necessary to the well informed and progressive physician as a dictionary is to an editor, or a Dunn or Bradstreet is to a banker. It has long been recognized that such a directory was needed. Medical directories, heretofore, have been published purely as commercial enterprises. The American Medical Association has undertaken the publication, upon ethical lines, of a directory of the medical profession of the United States and Canada, not as a commercial venture, but for the purpose of furnishing the profession with a register of legally qualified practitioners, together with other information of interest to physicians. This book is now being prepared and will appear early in 1906.

I. It is intended to give the names of all physicians legally qualified to practice medicine, and none other. II. It will contain exactly the same information concerning each physician, as no distinction whatever will be made between subscribers and non-subscribers. III. It will contain the following information concerning each physician: Name, year of birth, when it can be ascertained; medical college and year of graduation, literary degrees received in course, school of practice; address, office address, and office hours, in all towns over 50,000. IV. All information concerning college and the year of graduation, license and registration will be verified from official sources. V. Names of members of component county and constituent state associations will appear in capital letters. VI. The directory will, therefore, combine the features of a general medical directory and a society blue book. VII. It will contain under each state the following: (1) Medical Practice Laws; (2) Members of State Board of Health and of Board of Medical Examiners; (3) Medical colleges in the state with information concerning each; (4) Principal hospitals, sanatoria and health resorts; (5) Officers of State Medical Associations with roster of Component County Society Officers. Besides the general directory, arranged by states and towns, it will also contain: 1. A general alphabetical directory of physicians, with present address. 2. Directory of medical officers of the United States Army, United States Navy and United States Public Health and Marine Hospital Service; also list of United States Pension Examiners. 3. Directory of physicians engaged in special lines of practice. It will form a book of about 1200 to 1500 pages, 8x10½, bound in dark blue, half leather and half cloth, with gold title.

The price will be $7.00. Subscriptions taken in advance of publication will be subject to a discount of $1.00. Members of component county and constituent state branches of the American Medical Association will be given a discount of $1.00 from above prices. The pages devoted to the directory will contain no advertisements. Legitimate advertising will be accepted, but no advertisements of secret proprietary medicines or nostrums will be admitted. In support of this enterprise, undertaken solely for the benefit of the medical profession, the co-operation of all physicians is solicited. No pains, labor or expense will be spared to make the American Medical Directory the most accurate and reliable register of physicians that has ever been offered to the medical profession. You will receive from the publishers a blank for information regarding yourself. This data is desired not only for the American Medical Directory, but also for the Biographical Card Index of the American Medical profession, which is now being compiled. Information given in the directory will necessarily be limited, as shown in parapragh V above. All the information called for on the blank will be preserved in permanent form in the Biographical Index. It will be necessary to furnish this data once only. Personal information is desired in all cases. American Medical Association, 193 Dearborn Avenue, Chicago, Ill., U. S. A.

PRACTICAL DIETETICS. With reference to diet in disease, by Alida Frances Pattee, Graduate, Boston Normal School of Household Arts; Late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City. Special Lecturer at Bellevue, Mount Sinai and the Hahnemann Training School for Nurses, New York City. Third edition. Publisher, A. F. Pattee, 52 W. 39th St., New York City, N. Y.

The author, Alida Frances Pattee has had extensive hospital experience and is well qualified to write authoritively upon this important subject. She has also had in the arrangement of the work, the aid of the leading physicians and hospitals of New York and Boston. Nurses will find this book a very valuable aid in their work.

A SYSTEM OF PHYSIOLOGICAL THERAPEUTICS. A practical exposition of the methods, other than drug giving, useful in the prevention of disease and in the treatment of the sick, edited by Colomon Solis Cohen, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumption; consulting physician to the Jewish Hospital, etc. Vol. III. Climatology, Health Resorts, Mineral Springs. F. Parkes

Weber. Illustrated with maps. Publishers, P. Blakiston's Son & Co., Philadelphia, Pa. 1902.

The contents of these books are divided into two parts. Part one is devoted to physics, physiology and general therapeutics of climate. Part two treats of health resorts, including ocean climates and sea voyages. Volume IV treats of climatology, health resorts and mineral springs.

A MANUAL OF THE DISEASES OF NOSE AND THROAT. By Cornelius Godfrey Coakley, A. M., M. D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City; Laryngologist to Columbus Hospital, The University and Bellevue Hospital Medical College Clinic, etc. Third edition revised and enlarged. Illustrated with 118 engravings and five colored plates. Lea Bros. & Co., Publishers.

This is the third edition of a thoroughly practical work. It provides a compact manual that answers the needs of both student and practitioner. It gives special attention to methods of examining, diagnosis and treatment.

Students and general practitioners will find sufficient data on the various dieases of the nose and throat and their treatment, to give them a practical working knowledge.

MANUAL OF CHEMISTRY. A guide to lectures and laboratory work for beginners in chemistry. A text-book specially adapted for students of medicine, pharmacy and dentistry, by W. Simon, Ph. D., M. D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, and in the Baltimore College of Dental Surgery; Emeritus Professor in the Maryland College of Pharmacy, Department of the University of Maryland. Eighth edition, thoroughly revised, with 66 illustrations, one colored spectra plate and eight colored plates representing 64 chemical reactions. Publishers, Lea Bros. & Co., Philadelphia, Pa.

Simon's Chemistry needs no introduction to the profession of the United States. It has passed through seven editions. This one makes the eighth. It has been thoroughly revised and brought up-to-date in all parts. The arrangement is practical and scientific.

The subject has been divided into seven parts, each one of which contains sufficient matter to give the student a fair understanding of the subject. In the first part chemical physics are considered, including a brief discussion of electrolysis and the ionic theory from a modern standpoint. The second part treats of those principles of chemistry which are the foundation of the science, and enters briefly into a discussion of theoretical views regarding the constitution of matter. The third and fourth parts are devoted to the consideration of the non-metallic and metallic elements and their compounds. · The fifth part is devoted to analytical chemistry. The sixth part treats of organic chemistry. The seventh and last part gives the principal facts of physiological chemistry.

OPHTHALMIC NEURO-MYTHOLOGY. A study of the normal and abnormal actions of the ocular muscles from the brain side of the question, by G. C. Savage, M. D., Professor of Ophthalmology in the Medical Department of the Vanderbilt University, etc. Thirty-nine full page plates and twelve illustrative figures. Published by the author, 137 Eighth Ave., North, Nashville, Tenn.

This book is intended as a companion volume to opthalmic myology. The hypothesis on which ophthalmic neuro-myology is founded, may be stated as follows: There are eight conjugate brain centers, in the cortex, by means of which the several versions are affected, and one conjugate center by which convergence is caused. These conjugate centers act alike on orthophoric and heterophoric eyes, and when there is only one eye. Each of these is connected with two muscles, and the work done by the center and its muscles, under the guidance of volition, is normal work. The conjugate centers have no causal relationship with the heterophoric conditions, nor have they any power for correcting them.

There are twelve basal centers, each connected with only one muscle. If the eyes are emmetropic-orthoporic, these centers are forever at rest; but when there is any form of heterophoria, one or more of these centers must be ever active, during all working hours. These centers do not cause heterophoria, but they stand ready to correct it. Under the guidance of the fusion faculty, each basal center stands ready to act on its muscle, whenever there is a condition that would cause diplopia. They must be called fusion centers. This is an imaginary hypothsis and worth study and consideration.

INTERNATIONAL CLINICS. A quarterly digest of illustrated clinical lectures and especially prepared original articles on treatment medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Vol. II. Fifteenth series, 1905. Philadelphia and London: J. B. Lippincott Company, Publishers. 1905.

The special features of this volume are the excellent articles of King on "Some Observations on the Treatment of Pulmonary Hemorrhage by Adrenalin Chloride"; under medicine, "The Diagnosis of Incipient Thoracic Tuberculosis," by Wilson; under surgery, "The Pathology and Treatment of the Hernias of Children and Their Relation to Conditions in the Adult," by Corner, and the use of scopolamin as a general anesthetic in surgery by Felix Terrier.

Under gynecology, Palmer has a valuable article on "The Rational Therapy of Uterine Displacements."

These articles are well worth the price of the volume.

DAYTON'S EPITOME OF THE PRACTICE OF MEDICINE. A manual for students and practitioners. By Hughes Dayton, M. D., Principal in the Class in Medicine, New York Hospital, Out-Patient Department; Clinical Assistant in Medicine, Vanderbilt Clinic, College of Physicians and Surgeons, Columbia University. In one 12mo volume of 344 pages. Cloth, $1.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1905.

This volume is a wonderfully comprehensive little manual, giving under each named disease, definition, etiology, pathology, symptoms, complications, diagnosis, prognosis and treatment. It is especially worthy of remark that treatment is not merely suggested, but the doses of the indicated drugs are invariably given, together with the special symptoms, which call for a change from routine therapeusis. The subject of immunity has been succunctly treated with the assistance of Dr. T. Mitchell Prudden.

PROGRESSIVE MEDICINE, VOL. II, JUNE, 1905. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 346 pages, 48 illustrations. Per annum, in four clothbound volumes, $9.00; in paper binding, $6.00; carriage paid to any address. Lea Brothers, & Co., Publishers, Philadelphia and New York .

The June number of Progressive Medicine comprises a series of contributions of unusually wide scope, covering, as it does, certain of the most important branches of medicine, viz., surgery, pathology and the diseases of the eye.

Such topics as appendicitis, gastric ulcers, hernia and its treatment, pernicious anæmia, glaucoma and several others which have been so warmly debated within the last few years have been considered by veterans both of practice and of literature.

Coley and Foote of New York, Clark and Stengel of Philadelphia and Jackson of Denver, are among the prominent contributors.

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TREATMENT OF VALULAR DISEASES OF THE HEART.

BY GEORGE MURRAY WATERS, A M., M. D.,

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Structural changes in the heart, the result of either disease or accident, are incurable with few exceptions. Surgeons have successfully repaired and cured injuries such as stab wounds of the myocardium, but endocardial surgery of the heart, for reasons that are obvious, is not likely to ever develop to a degree of general application and usefulness. Indeed, from the beginning of medicine, doctors have looked upon organic diseases of the heart as incurable.

I take this opportunity to voice a belief which may be concurred in by many, though perhaps only after some thought. I believe our profession guilty of a shortcoming, which to my mind, has contributed notably towards the establishment of modern quackery. We tire of incurable cases, lose our patience and tact, became lukewarm, or even indifferent, and unconsciously manifest our attitude to the patient, much to his or her discouragement and detriment. To this charge I plead guilty, and others must if they would make honest report of their practice. The result is that the victim of an incurable disease loses heart and courage the instant he learns that the one in whom he has implicit confidence, and the only one to whom he looks for help, has manifested a lack of interest. The unfortunate person, perhaps fortunately in some instances, cannot be made to know his condition of things, hopes there may after all be help for him, and falls an easy victim to quackery. I believe no one needs the personality of an honest physician, outside of his science and his art, more than the sufferer from an incurable disease. Put yourself in the victim's place and think.

This direct question now appears appropriate: What can be done for valvular diseases of the heart? My answer is, much, and I believe the assertion will be sustained.

Every normal heart has a capacity in excess of that required to move the blood under ordinary conditions. This is the so-called accommodation capacity which serves to maintain an equilibrium of the circulation under physical exertion of various degrees. Without this provision of nature, the so-called reserve force, the most trifling organic deficiency would at once cause embarassment of the heart. Having before us this physiological fact, it is easily understood that a considerable lesion may exist without serious results or symptoms of note. The individual may not even be aware of his malady. However, when the heart is suddenly crippled to the extent of requiring the use of all the accommodation capacity, then it becomes embarassed, and on the slightest physical provocation matters become serious. When valvular defects are more gradual in their development, nature again manifests herself in a cellular change by which each nucleus gathers about itself more protoplasmic matter, the whole heart muscle becomes larger and stronger, and then we say compensatory hypertrophy has been established. The heart is now larger and stronger than normal, and so it must be to overcome the loss of leakage, and to maintain a fairly normal circulation. We now have two additional factors at work in maintaining the circulation, namely, a portion or all of the accommodation capacity and the compensatory hypertrophy.

Just so, people may live their expectancy under favorable conditions with a seriously diseased heart and little discomfort. There comes a time, however, in most cases when the limit is reached and the nuclei can no longer command the amount of protoplasm accumulated. There is now a collapse in heart strength, perhaps dilatation, and we call this broken compensation; an accident attended by serious symptoms and great danger. Knowing these simple facts, it is fair to conclude that much can be done in the way of making comfortable and prolonging the lives of the great army of heart sufferers who live in constant fear of sudden death.

In point of treatment, cases of valvular disease must be arranged in classes, based upon the state of compensation; for what would prove beneficial to one, might be a detriment to another, though the lesion be the same. Knowing that compensation may be either complete, partial or entirely wanting, we are at once in full possession of a reliable cue to treatment when the real condition is determined.

A fully compensated heart, we all understand, is one in which structural change and consequent inefficiency is completely balanced by increased size and strength of the organ, thus maintaining the circulation normally or nearly so. In many cases of complete compensation the individual is often entirely unaware of his malady, and the discovery rarely made except by special examination, or after some slight cardiac embarrassment has prompted investigation on the part of the physician. Certainly we should all be in harmony on the point that a man with a normal circulation, even though he may not have a perfect heart, is not in need of medicinal treatment. Advice against the use of drugs under such conditions would seem superfluous, and yet I regret to say the practice is not uncommon to prescribe a well-known heart stimulant immediately on the discovery of a murmur. No, the individual having a murmur indicative of structural change, and full compensation does not need medicine, but wholesome advice, as to how he should live. The general trend of a cardiac lesion is to grow worse under the best conditions, and a heart patient without a physician is quite likely to meet the same fate as a boat without a pilot.

Most people should be frankly and promptly informed of their physical misfortune in order that the physician may have full co-operation in the management of the case. There are cases in which circumstances such as temperament, habits and manner of life, must govern the physician in withholding knowledge of the patient's real condition. This, however, is the exception and not the rule.

In the class of cases having complete compensation the chief object is to maintain cardiac power. Intelligent instruction on certain points to be mentioned will contribute to comfort and longevity. He should be warned against any kind or degree of bodily exertion which causes dyspnoea. If the patient is of fair intelligence, it may be well to explain that bodily exertion puts upon the heart a strain, and, if persisted in, even the strengthened heart walls may yield, and dilatation supersede, with serious results. No one having a defective valve should run, climb, lift or indulge in any athletic sport which is likely to throw undue strain on the heart. On the contrary, the same patient must not become wholly sedentary and make of himself a confirmed invalid, but indulge moderately in recreation such as golf, billiards, fishing and others equally harmless. Indeed, in no malady is a certain amount of physical exercise more essential. Stokes, of Dublin, recognized and called attention to this fact, and trained his patients in a manner which would not only maintain but induce compensatory growth.

Occupation is of major importance in all heart cases. Fortunately, in one sense at least, most cases are brought to the physician's notice early in the life of the patient, thus giving an opportunity for selection of suitable employment. This point may be dismissed by recommending any occupation not involving great mental or bodily strain. To name such occupations would be superfluous.

The physician who fails to advise heart patients in the matter of habits, neglects an important duty. Moderation or abstinence must be the underlying principle from which no departure can be considered. No one doubts that the healthy heart may be injured by tobacco intoxication. The diseased heart should be given absolute freedom from this danger. Even more can be said of the danger of sexual excesses. The question of marriage arises, and for the male it is usually beneficial, regulating indulgence, but for the woman such a step is debatable, and the fact that some women with heart lesions have passed safely through maternity does not settle the question. The attending physician must know the evidence in each instance, and act with his best judgment in recommending or discouraging the marriage of a woman with a heart lesion.

Cardiac patients are sensitive to cold and should wear warm and well fitting clothing. Tight clothing works continual harm.

Bathing should be done at intervals adequate with bodily cleanliness, and in neither hot nor cold water. Too frequent hot baths lower vascular tone and weaken the heart. A daily sponge and a weekly tub of short duration meet ordinary requirements. Cardiac patients must abstain from Turkish and Russian baths.

The heart deficiency in itself requires no drug treatment. However, if one belongs to that great fraternity which believes that every patient must have medicine of some kind, then a placebo may be prescribed. Some men have the courage to honestly tell a patient that no benefit will accrue from medical treatment.

A condition of imperfect compensation requires a different treatment. Complete compensation, owing to extensive damage to the valves, may in certain instances be impossible. In other cases compensation may have been complete and in time the lesion become so extensive as to require more than nature can provide. In either case the condition is grave and the life of the patient uncertain. Every therapeutic measure must now be brought to bear in order that we may contribute to both the comfort and longevity of the sufferer.

In the treatment of such patients all that has been advised in the management of well compensated cases, in the way of habits and occupation, applies to the less fortunate. In this stage medicines may be used to an advantage and the one medicament which stands head and shoulders above all the others is digitalis. I know that preparations of this drug as found in the stores vary in strength and efficiency. My attention has been called to this in cases where I had reasons to expect certain results and failed. I once took up the subject of digitalis direct with the elder Edward R. Squibb and from him learned many things of value, and, I might say, ever since have used the Squibb product with satisfaction. Some experience difficulty in administering the drug, owing to its effect upon the stomach, but this can be avoided in most cases by beginning with a small dose, and, day by day, increasing to the amount required in a given case. Five drops of Squibb's tincture increased to 10 or 15 three times daily, usually fulfills the indication. In those cases of valvular lesions and imperfect compensation associated with arterial hardening, excessive vascular tension may be avoided by the simultaneous use of nitro-glycerine. Instances are few in which digitalis cannot be used for weeks, months or even a life time.

Strychnia stands a close second and should be used in medium doses, 1-40 to 1-80 grain, every four hours. Some give the drug in more heroic dosage but Curtin, of Philadelphia, and Lauder-Brunton, of England, are sufficient authority to lead us from this error. Heart cases become habitues of both digitalis and strychnia, but no harm can, and much good may result from their use.

These remedies increase the driving force of the heart by lengthening systole, adding tone to the myocardium, and slowing embarrassed heart action. It has long since been shown that the heart force is not entirely spent upon the arterial blood, but that the capillary and venous blood is moved largely by the same means. A crippled heart and venous stasis, therefore, go hand in hand, and while increasing the heart's force usually corrects the difficulty, in some instances other means must be employed. Some outlet to the congested venous system must be found, and the most satisfactory method beyond doubt, is by way of the intestines. When digitalis and an open bowel fail to establish and maintain a fairly reliable equilibrium between the crippled heart and the venous circulation, the case is hopeless.

Perhaps no drugs meet the indication just mentioned more satisfactorily than the old-time blue pill, followed by a saline. In milder cases cascara, aloes, or compound jalap powder, act satisfactorily.

Other conditions such as anemia, and flatulence must be appropriately treated. So much for treatment by drugs.

There are other theraupeutic measures, scarcely secondary, which must not be overlooked in the management of this class of cases. So long as compensation is incomplete as manifested by shortness of breath, feeble and irregular pulse, color, and cold extremities, the patient must remain inactive, indeed rest is the important factor. Strap a man to a horizontal table, then shift until the body is erect without physical effort on the part of the individual. It is at once noted that the pulse rate has changed as a result of forcing some blood against gravity. The slightest physical exertion calls for more heart force. Now, if we are endeavoring to repair a crippled heart, it must have a minimum of work, so absolute rest is a therapeutic measure of the first importance. Respiration is less active, muscular movement suspended, strain is removed, and the embarassed heart will often rapidly regain power and serious symptoms be promptly relieved. It would be interesting to consider the effect of rest upon individual lesion, but that would not be practicable on this occasion.

Patients having incomplete compensation are always in danger of evil results from overdoing in one way or another. Persons so affected should never walk rapidly, never run. Their occupation should be easy for both mind and body, and entirely free from mental excitement and physical strain. It is not essential for all sufferers to be entirely inactive, and indeed moderate exercise such as may be advised by the attending physician is often helpful and serves for the basis of the Oertel plan of treatment. In any event exercise by those patients must be carefully superintended or harm will result. Tight clothing, which hampers thoracic expansion, or constricts the waist must not be worn. Tobacco and alcohol in all forms must be used in a minimum degree, and far better not at all. The bowels must have intelligent attention and the diet be regular and nutritious. The patient must live free from all excitement and sexual indulgence should be rigidly forbidden.

I will now speak of the management of conditions of the heart known as lost or broken compensation. In many cases which reach this stage, little can be done except to palliate suffering and await the end. However, the physician should not be too prompt in giving up hope. True enough, symptoms often point to approaching dissolution, and yet, the heart may, when least expected, recover partial compensation and life be continued indefinitely. Osler tells us of an instance in which a heart had been restored to fairly good action after ten attacks of so-called compensation, and we have all made similar observations.

Let us look at a patient in this stage or condition of heart disease. He must sit up in order to favor respiratory movement and to relieve dyspnoea as much as possible. The cough is troublesome and often results in raising bloody, frothy mucus. His color is bluish, cyanosis sometimes extreme, and his expression is that of great anxiety. The pulse is feeble, frequent and irregular; there is dropsy of the lower extremities, and perhaps general anasarca. The heart sounds are feeble, some absent or accompanied by murmurs. Moist rales are heard over edematous lungs, and the liver is enlarged. Here is an object of pity, familiar to every practitioner. Death seems certain and imminent, and it is no wonder physicians often give up all hope and say there is no help. But this is not our privilege or duty. Every effort must be made despite the apparent hopelessness of the case, and often our work is rewarded. Let us consider the exact condition. There is a valvular lesion, perhaps for years compensated, and at last by some over strain the enlarged wall of the right ventricle has given away, as we call it dilatation with its familiar consequences. There is great heart embarassment as manifested by the feeble, flickering pulse, the right ventricle is overfilled, too weak to empty itself and general venous stasis occurs. Under these conditions many physicians administer digitalis and lose confidence in this valuable drug because it fails to relieve the distressing conditions. The lash does not help the horse which, though willing, is burdened quite beyond his strength. The first intelligent step is to lighten the load and then add power to the heart if possible. Absolute rest, and a small but nutritious diet should be insisted on, then calomel, blue mass, compound jalap powder, or anything which will cause copious intestinal evacuations, should be used; finally strychnia or digitalis. Doctors should learn that very often digitalis must be administered after purgation to show its good work. Some advise bleeding, especially in the strong and full-blooded, to relieve venous congestion, but in my experience I have had no such cases, and have always preferred depletion by way of the intestines. Early in my professional life I saw the case from which this picture of lost compensation is drawn. Compensatory action was re-established and the patient, a business man, well known to some of you, died only two or three years ago at the age of about sixty-five. I might say that during the last fifteen years of his life, digitalis was used thrice daily.

I have hurried over this important subject, calling attention only to salient features of the treatment of valvular lesions, so I will summarize as follows:

In no other disease can the physician accomplish more good than by assuming the role of teacher and giving frequent and detailed instruction in the correct manner of living. Laymen, educated and otherwise, are woefully lacking in knowledge of their own bodies. We too often overlook this fact and neglect, as a consequence, things which seem to us common knowledge, but to the patient of great importance.

In fully compensated conditions no medicinal treatment is needed except keeping the bowels well regulated. The patient must lead a quiet, orderly life, free from mental excitement and bodily strain. Tobacco and stimulants must be used in severe moderation if at all; and the skin should be kept active by daily sponge and weekly tub baths of short duration. Moderate exercise, never to the extent of fatigue or embarrassed breathing, but even this should be supervised by the physician in charge. Especial care should be taken in the management of the aortic heart defect, and the patient repeatedly warned against excesses of all kinds and particularly sexual indulgence.

In the condition of lost compensation, absolute rest is of the first importance. The clogged venous system must be relieved by depletion. This is best accomplished by the use of cathartics such as calomel, blue mass, or compound jalap powder. Digitalis alone or combined with strychnia in moderate doses will strengthen the heart force, regulate the rythm, and add tone to the organ generally. Do not be reluctant in the use of digitalis. Osler says: "Broken compensation, no matter what the valve lesion may be, is the signal for its use. The indication is weakness of the heart muscle; the contra-indication is a perfectly balanced compensatory hypertrophy. Under its use the dyspnoea is relieved, dropsy gradually disappears, the pulse becomes firmer, fuller in volume and regular."

Special symptoms as dyspnoea, cardiac distress, gastric disturbances, cough, insomnia and renal inactivity are relieved chiefly by means of general rules set forth. Special treatment may be required in each according to the condition of the individual case.

If this unpretentious paper serves no other purpose, I sincerely trust it will prove an incentive in the closer study of the treatment, and more conscientious care of a common and incurable malady.

ACUTE APPENDICITIS AND ITS COMPLICATIONS FROM A CLINICAL STANDPOINT.*

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In this discussion I am purposely leaving out of consideration the so-called chronic and recurrent forms of appendicitis, and propose to deal only with the true acute cases and some of their complications. It is a question just where the line of demarkation should be drawn between appendicitis and its complications. Undoubtedly, if one were writing a pathological article he would confine the term appendicitis to inflammations of that organ alone, but it is very doubtful whether acute appendicitis exists alone, for more than a few hours at the onset of the attack, and from a clinical standpoint I believe we should consider all cases as appendicitis so long as the infection and inflammatory process is confined to the immediate vicinity of the appendix and the condition of the appendix is the determining factor in the outcome. The common complications would then be limited to large localized abcesses, general sepsis suppurative peritonitis, septic pneumonia, etc. In the reports which are published by surgeons of national reputation upon this subject the constantly iterated and re-iterated cry is for earlier diagnosis and the question as to the possibility of early diagnosis certainly deserves a portion of our time. While I am constantly pleading with my consultants for the earlist possible diagnosis of their appendiceal cases, I am not unmindful of the difficulties which are frequently encountered in the formation of a diagnosis before rupture and localized or wide-spread peritonitis has begun. In fact the constant assertion that the immediate diagnosis of appendicitis is not only possible but easy in all cases comes from men belonging to the class of surgeons who have not served their apprenticeship in general practice and therefore never see their cases until diagnosis has become very easy because of the lapse of time. I would not be understood by this as looking favorably upon that form of procrastination which is often almost criminal, but rather wish to explain in advance that I am positive there are some cases in which immediate diagnosis is impossible. In the direct diagnosis the dictum of Murphy that epigastric pain followed, not preceded, by vomiting and elevation of temperature is significant, is of value but, entero-collitis, gall stone colic, even renal colic may sometimes have precisely this order of sequence in their development.

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*Read before the Canton Medical Society, October 6, 1905.

A previous history in which the chacater of the illness was cleared up by the lapse of time is of the greatest value if reliable, but the history of many patients is so colored by their personal beliefs and particularly what they desire that it is worse than useless. Neverthless a clear history by an intelligent, unprejudiced patient must have great weight. In women a ruptured pus tube or a ruptured tubal pregnancy may be very confusing especially as all three many have normal or subnormal temperature at the outset to be followed a little later by elevation. The most amusing as well as apparently uncalled for mistake that I have made was to operate for fibroid and discover appendicitis with an abdominal cavity whose contents were solidly welded together by adbesions but this of course was not an acute case. In children pneumonia is probably the most difficult disease to exclude and when one remembers that a few cases of appendicitis are actually accompanied by pneumonia and that in early pneumonia pain in the abdomen, tenderness and even rigidity may be present the solution of the difficulty becoms most complex. The physical evidences of early pneumonia in childhood are so often absent that no dependence can be placed upon them from a negative point of view.

Let us admit that in many cases of acute appendicitis the diagnosis is perfectly clear within a few hours from the first symptoms of the attack and that any patient suffering diffuse, abdominal or localized epigastric pain followed by vomiting and elevation of temperature with re-localization of the pain in the right iliac fossa, tenderness over McBurney's point and rigidity of the right rectus muscle almost certainly has appendicitis and this slight doubt is brushed aside if tumor formation makes its appearance after forty-eight hours.

There are two ways by which one may consider differentiial diagnosis, one the ordinary method to discuss all of those diseases resembling that under consideration, the other to discuss separately the symptoms usually present in a given condition and point out in what respect they differ from similar symptoms when present in other conditions. Let us adopt the latter plan and ascertain whether it does not give us the better results.

Pain.—Pain is ordinarily the first symptom of which the patient complains and it is not to be forgotten that the very first pain may be epigastric or diffuse but a few hours later it is usually found in the typical McBurney location. Precisely the same sort of pain may be complained of in perforated gastric ulcer, right-sided salpingitis, right-sided renal colic, cholecystitis, intestinal obstruction, ectopic pregnancy ileo-colitis, and pneumonia. It is therefore evident that the mere symptom of pain, while significant, is far from pathognomonic. Nausea and vomiting usually occur soon after the pain but so do they in all the other conditions mentioned excepting ileo-colitis in which nausea may precede pain, and pneumonia and ectopic pregnancy in which conditions vomiting is not a prominent feature.

Fever.—Fever is not of necessity an early symptom of appendicitis. Undoubtedly no case of appendical inflammation pursues its entire course without some elevation of temperature but the shock of perforation or the preliminary so-called appendiceal colic may be associated with no elevation, or even depression below the normal. Gangrene of the appendix may have a sharp elevation at first to be followed almost immediately by a drop to or below the normal. There is nothing characteristic in the temperature record of appendicitis and even the presence of pus is not certain to cause fever. Perforation of any abdominal viscus may and usually does cause a sub-normal temperature followed by elevation so soon as the subsequent peritonitis begins. Ileo-colitis usually has some elevation at the beginning. The temperature of gall bladder cases is frequently characteristic as pointed out by Moynhan, having an irregular but extreme variation within a few hours the so-called church steeple curve and it ought not be forgotten that there is fever in ruptured ectopic so soon as the primary shock of rupture and hemorrhage is past. Very high temperature would at once cause one to suspect pneumonia ileo-colitis or cholecystitis rather than appendicitis in which the fever curve is usually a moderate one. Taking all the subjective symptoms into consideration then, one cannot do more than have impressions made upon his mind in one direction or another without arriving at any definite conclusions. Conversely one might have appedicitis without pain, the gangrenous form, without temperature at the time of examination and without nausea but in the absence of *all* of these one would be extremely doubtful of its existence.

Of the physical evidences, the expression of the face, character of the pulse and results of abdominal examination are the most important. The facial expression at once leads one to suspect a serious abdominal lesion and although facial expression is far more important from a prognostic than a diagnostic standpoint it is nevertheless too much neglected. The older clinicians, like Fothergill, paid great attention to this point and the latter bemoaned the fact that the introduction of instruments of precision like the thermometer and stethscope was making medical men less acute as observers. The pinched anxious expression of severe abdominal infections and inflammatory lesions is perfectly familiar to all and is quite different from the anxious pallid breathless, if I may so term it, appearance of intra-abdominal hemorrhage, the flushed preoccupied look of the pneumonia patient or the agonized appearance of the victim of renal or gall stone colic. The character of the pulse is also much more significant as a prognostic factor. There is nothing characteristic of the pulse of appendicitis and I mention it only to absolutely condemn that attitude which does not consider a case of appendicitis dangerous because the pulse is not excessively rapid. The first irritation of infection may cause a fast pulse to be succeeded by one only moderately rapid and the weak running pulse so much sought as the evidence of suppuration too frequently makes its appearance only after the onset of fatal generalized sepsis. A rapid pulse is also of far more serious import in the male than the female. In the abdominal examination localized tenderness, rigidity and tumor formation are the principal factors to be considered. Localized tenderness to pressure is a very valuable asset in our diagnostic efforts and has in my experience never been absent in any save the most severe forms of gangrene but it is not necessarily over the classical McBurney's point. Very early the abdominal irritation may be so severe that tenderness is universal, but later the location of pain elicited by pressure is near to the site of the disease process. In this connection allow me to call attention to the fact that an appendix retro-cecal may not be sensititve to pressure applied anteriorly over it and that in a case which is not perfectly clear a complete examination has not been made until pressure has been made over the posterior as well as anterior abdominal wall and both together. The elastic cushion of gas in the coecum may entirely prevent a sufficient amount of pain if pressure is made anteriorly only. A patient's word is not always reliable as to the site of greatest tenderness either because he may be too stupid or because of a fear of appendicitis he may deliberately mislead, but the expression of the face when the average individual is caused pain is sufficient to demonstrate without taking his word for it. Tenderness precisely over McBurney's point then is very valuable as a positive diagnostic sign, impacted ureteral calculus alone being the only condition ever exactly simulating it but its absence does not mean that acute appendicitis cannot be present.

Rigidity.—Involuntary fixation of the abdominal muscles over an inflamed organ is to my mind the most conclusive of all the early evidences that such inflammation exists and in appendicitis this is especially well marked. Indeed it is so pertinent to the diagnosis that if it were absent after repeated examinations the writer would be very loath to believe that appendicitis could exist. In complete gangrenous appendicitis there may be an interval between the death of the appendix and the succeeding peritonitis when rigidity is not present but certainly in the writer's experience there has never been an exception to the rule, no rigidity no appendicitis, save at this time. While rigidity is present during the passage of a renal calculus it is so evidently voluntary that it should not mislead. The rigidity of cholecystitis is marked but distinctly over the gall bladder while the rigidity of pelvic diseases never so pronounced as in appendicitis of an equal degree of severity. This I believe has never been explained but is presumably due to the fact that the inflamed appendix has a hard bony wall under it and is thus at once hurt when compressed. This seems all the more likely when we remember that a retrocoecal inflamed appendix rarely causes such pronounced rigidity as in the other locations. There is something in the variation of tension when the appendiceal region is compared to the other side of the abdomen which always appeals to one as the variation in pitch of the percussion note of a diseased chest appeals to the accomplished internist. The results of rectal and vaginal examination are usually nil in the early stage of appendiceal inflammation but many times late in the disease localized accumulation of fluid is found in the pelvis. In men these are rarely other than appendiceal abcesses, primary or secondary. In women they may of course be tubal or both tubal and appendiceal and an accurate history is often then the most reliable guide. As has been shown localized pain changes in temperature, tenderness to pressure and to a certain extent rigidity may exist over the region of the appendix during the passage of a renal calculus and in this connection the value of laboratory examination becomes manifest, especially if in the hands of a skilled microscopist, for blood in the urine in small amounts a trace of albumen and cells from the pelvis of the kidney are one or all present in renal calculus. While the results of a blood examination should never be depended upon for a positive diagnosis, leucocytosis I believe is always present save in old well walled off abcesses and in the most acute and positively fatal forms of sepsis. On the other hand an extremely high leucocyte count, 40,000 or over, should always suggest pneumonia rather than a suppurative lesion. In the diagnosis then there is no evidence absolutely pathognomonic, but rigidity is most nearly so and when combined with a fairly accurate history with localized tenderness and a moderate leucocytosis the conclusion is placed beyond the realm of reasonable doubt. I shall not dwell upon tumor formation because it is itself evidence that our diagnosis is made late but with the foregoing evidence in front of us the presence of tumefaction makes a diagnosis as near positive as we can be of anything, but the absence of tumor early or late, particularly without an anesthetic, should never lead one to exclude appendicitis.

Prognosis.—Appendicitis is never fatal. It is appendicitis plus its complications which kills and they do kill at times in spite of any form of treatment which may be adopted. Generalized sepsis takes a few lives before any localized inflammation manifests itself, general peritonitis destroys many lives either from primary dissemination of infectious material or rupture of abscesses late. Septic pneumonia claims many victims and if I were to judge from my own comparatively limited experience it is especially apt to occur when the appendix is behind the coecum. To be specific the prognosis in every single case is in doubt until the patient has entirely recovered, for no one at the present time is able to say from the symptoms when a case is catarrhal suppurative or gangrenous.

Treatment.—It is customary to mention two methods of treatment of appendicitis, medical and surgical. It is hardly necessary in a society of this character to say that there is no medical treatment which contributes in the least to the cure of acute appendicitis. That medical management of a patient who is the victim of appendicitis and proper medical treatment of its complication contributes to recovery I fully believe. It will be noticed that under prognosis I gave no figures and this because statistics may be made to tell falsehoods of the most glaring kind. There is a very distinct and perceptible mortality rate for all cases of appendicitis and complications under medical treatment as well as surgical but the exact rate it is very hard to ascertain, first and foremost because the medical treatment of fatal cases is usually carried out until it is evident that the patient is going from bad to worse when the surgeon is called as a last resort and the death is charged to operation and not to procrastination as it should be. Nearly, if not all, patients with acute non-suppurative appendicitis with localized non-suppurative peritonitis recover under medical treatment, and many times in spite of it, and a fair proportion with localized abscesses do likewise by rupture of the abscess into the bowel. Victims of true gangrenous appendicitis all die under medical treatment as do most of those who have diffuse peritonitis, septic pneumonia, generalized sepsis or intestinal obstruction. Theoretically then the medical management of patients with acute appendicitis should be restricted to those having the non-suppurative forms of the disease. On the other hand the very best clinicians are willing to admit their inability to tell what is going on in the belly of a patient with appendicitis until he has recovered, been operated or autopsied. In my judgment the medical management should be confined to those patients refusing operation or in whom the diagnosis is so doubtful as to make operation inadvisable or whose circumstances and surroundings are such that operation by a surgeon of at least average ability cannot be done. Undoubtedly skillful medical management is preferrable to amateur surgical. Having decided upon medical management exclusively we have to consider both the comfort and the ultimate outcome of the case and with these ends in view localized infection should be kept from spreading and the pain relieved. Careful evacuation of the bowels by enema, not cathartics, a greatly restricted diet, an ice bag continuously applied and opium are the principal means at our command. I am perfectly convinced that cathartics do great harm by spreading infected serum widely over the peritoneum by the violent peristalsis which they cause. The ingestion of more food than the enfeebled digestive powers can manage leads to tympany and distress, the ice bag relieves pain much more certainly than the poultice or the mussy proprietary preparations and although opium is tabooed in high surgical circles, I have never been satisfied that it did the slightest harm after the diagnosis was made and decision not to operate arrived at. Certainly if I had appendicitis and were so situated that operation was out of the question I should demand that enough opium be given to keep me comfortable. The use of specifics and intestinal antiseptics is absolutely without effect upon the infected lesion which is entirely shut off from the intestinal tract. General sepsis is almost uniformly fatal but a few deaths may be averted by saline infusion strychnia and, I mention with some reservation, the use of colloid silver intra-venously.

Surgical Treatment.—All cases of acute appendicitis should be operated upon if severe enough to justify a positive diagnosis irrespective of the duration of the disease unless obviously recovering or obviously beyond the hope of recovery, and the earlier the better. The rule to wait for twenty-four to forty-eight hours in order to ascertain whether the disease is progressing is a bad one. If the patient improve he still has his appendix to make trouble or be removed later. If he fails to improve he will by this time have peri-appendicitis and probably localized suppuration, rendering operation more hazardous, making prolonged drainage necessary and contributing to the formation of hernia later. If the patient has the gangrenous form he will appear to be improving until too late for operation to be effectual and the deceptive remission between the time of perforation and the onset of general peritonitis has been brought to our attention time after time. Naturally, an appendix swollen tense and full of pus is painful, and its rupture lessens the pain temporarily, but the time for simple and safe intervention has passed. Operation before rupture or infection of the peritoneum should have no or practically no mortality rate and each day's delay makes the death rate distinctly higher. In the technique of the operation so many questions arise that one could not possibly discuss them within the limits of this paper. A few only may properly occupy a little more of your time. In early cases it is universally conceded that the appendix can and should be removed. In later cases with severe peritonitis or large abscess the propriety of its removal is sometimes in doubt. Increasing experience will, I think in any man's practice, lead to its more frequent removal. The dangers of recurrence and fistula are such that once the abdomen is open the average surgeon will feel like continuing to a complete operation, but if the abscess be large and pointing towards the rectum or vagina, if the patient be in a critical condition so that prolonged search for the appendix or much manipulation would be badly borne, its removal is not desirable. Each case is a law unto itself with the consciousness ever present that in desperate cases the immediate saving of life is the object of operation rather than complete surgical procedure. If the latter can with propriety be addd so much the better.

Drainage.—The old dictum, "when in doubt drain," applies very forcibly to the surgery of acute appendicitis. In recent cases scanty and short drainage suffices but later free drainage alone is safe. I have no patience with the tendency in some quarters to restrict drainage and leave the rest to nature. It would be just as well to leave the case to nature in the first place and not operate at all. In connection with this paper I wish to record fifty consecutive operated cases of *acute* appendicitis which illustrates some of the points which I have tried to make. During this interval but two cases have been refused operation, both instances of general peritonitis, one of which was dying and the other recovering when first seen. The youngest case was thirty months, the oldest forty-two years, the majority between fifteen and thirty. Out of fifty cases in just one instance was the infection limited to the interior of the appendix. In one complete gangrene with no adhesions had occurred and fecal matter was pouring from the coecum into the free peritoneal cavity. In many others partial or complete gangrene had taken place but adhesions had formed first. In one other a large perforation permitted fecal matter to pass into the peritoneum without limiting adhesions. Both of these patients recovered, being operated within twenty-four hours. In four cases only there was infection and exudation of plastic material about the appendix without suppuration. Two cases were associated with purulent salpingitis and oophritis. Thirty patients had a small amount of pus varying from a few drachms to several ounces with limiting adhesions sometimes walling it off perfectly from the abdominal cavity, but often with the walls defective in some part. Several of these patients had two abscesses in different parts of the abdomen, a fairly common form being a retrocoecal appendix with a perforated or gangrenous tip surrounded by pus with a secondary accumlation of pus intraperitoneal, proving that the perforation was not the sole source of the infection. Eleven were instances of immense abscess formation and two were cases of suppurative peritonitis in which the process had proceeded slowly enough to convert the abdominal cavity into one immense abscess. Both of these cases died but one was moribund at the time of operation which was done under protest, with local anaesthesia. Spreading peritonitis, meaning by that term an inflammatory condition of the peritoneum, which had become diffused beyond the immediate vicinity of the appendix was present in four cases; of these one died. There were all told five deaths, including the case above mentioned as moribund at the time of operation, two remaining deaths being due to septic pneumonia, one ten days, the other two weeks after operation. Both cases of suppurative peritonitis were operated upon the fifth day, one case of pneumonia upon the fourth, pneumonia was present before operation, the other was unknown, but not earlier than the fifth or sixth day. The fatal case of diffuse peritonitis was operated about ten days after the first sysmptoms and lived four weeks, dying suddenly after getting out of bed. I have no hesitation in saying that all of these cases might have been saved by early operation but not one of them would submit to it until the favorable time had passed.

Of the fifty cases the appendix was removed in thirty-nine at the primary operation and in two women the primary operation was vaginal, the appendix being removed later through the abdomen, the vaginal fistula persisting until this was done. Including these two cases there were five fistulæ out of evelen cases in which the appendix was not removed, nearly one-half of all, and the proportion is still higher when it is recalled that two of these cases died; a rather sharp rebuke to the idea that incision and drainage of appendiceal abscesses is all that is necessary. One fistula only was left of those in whom the appendix was removed and this was due to tearing off the tip and leaving it attached to a suspicious spot in the cecum. This was afterwards removed by an extra peritoneal operation. I will weary you with details of but a few individuals cases. One, a boy of seventeen, recovered from septic pneumonia after apparently developing gangrene of the lung, running a typical hectic temperature for six weeks, and finally recovering after expectorating several cupfulls of the most villanous smelling pus. It is worthy of note that all three of the instances of septic pneumonia were in the right base first and the appendix was retro-coceal. One rather puzzling case developed on the fifth day after an operation for left inguinal hernia, and is mentioned above as one of the cases in which fecal matter was pouring into the free peritoneal cavity. Two developed post-partum and were supposed to be puerperal peritonitis until operation revealed the true source of the trouble. Still another had an operation for appendicitis two years previously and was told that his appendix had been removed. It was found behind the cecum in an immense abscess. This patient ceased to breathe and became pulseless at the close of the operation, but finally rcovered.

In conclusion, I would ask the members of this society to pardon me for inflicting a paper upon so time-worn a subject upon them. My only apology for so doing is the fact that the last word has not been said upon acute appendicitis and until it has each man's experience, even if not extensive, is of value.

RETROSPECTIVE "MEDICINE AND SURGERY."

BY H. B. GIBBON, M. D., TIFFIN, OHIO,
President Seneca County Medical Society.

The healing art, or the practice of medicine and surgery, is the oldest profession in existence today. While it is fair to presume that the practice of medicine dates from a time soon after the creation of man, or at least very early after the denunciation "by the sweat of thy face shalt thou eat bread," the practice of surgery antedates this somewhat. While I am unable to find anywhere in the annals of surgery mention of the operation, yet according to chronology the first surgical operation dates back nearly six thousand years ago, or to be a little more exact, it was five thousand nine hundred and nine years ago. Although it was not until the year 1846 that Dr. Morton demonstrated the utility of general anesthesia in surgical work, we are informed that the first operation of which we have any record was done while the patient was under general anesthesia. A brief description of it may be found in that old book which all Christian people revere—the Bible. For further information, I will refer you to the second chapter and the twenty-first verse of Genesis. But at just what period in the world's history the practice assumed the dignity of a profession, is shrouded in mystery. All the way, down through the ages, to the present time, there was, as there is now, more than a possibility of the prevalence of disease and affliction by accident calling for treatment, and with increasing population the frequent calls for the services of those more proficient in the care of the sick and injured, afforded a stimulus to the development of these faculties and culmination in the introduction of the practice, now distinguished as the profession of medicine and surgery, of which we its representatives assembled, stand pre-eminently The Profession. It would be presumption in the extreme to assert that the profession had attained to its present degree of excellency without its growth and development having been somewhat retarded by at least some of those diseases incident to infancy and childhood, but we sincerely hope that it may be spared from those afflictions to which the aged are most susceptible, the most prominent symptoms of which, evidence degeneracy. Doubtless, and history verifies the statement, all sorts of decoctions and compounds were administered to the sick and applied to the injured by professional as well as non-professionals for the cure of disease and the relief of the injured long before white pine compound and antiphlogistine were introduced to the profession as the remedies par excellence.

From the earliest introduction of the practice of medicine and surgery there has been springing up new pathies and cults, until today, even the most cynical can find treatment suited to their own peculiar ideas, of their real or imaginary ailments. Whether these isms or pathies have been potent factors in the development of the profession, or were conducive to progress in the science of medicine and surgery may be somewhat questionable, yet not wholly without argument. Notwithstanding this, the profession may well be congratulated upon the progress it has made, especially the advancement during the past half century.

By the aid of the microscope and the appropriation of the abundance of material, furnished at the dead house, and by the untiring efforts of our more enthusiastic conferees, our pathology is established upon a firmer basis, making it necessary to revise our therapeutics to keep it in harmony with advancement and to fix it upon a rational basis. Through our acquired knowledge of asepsis, puerperal infection no longer appears as epidemic. The isolation of patients afflicted with contagious diseases and the observation of sanitary laws has so far reduced the spread of contagions that epidemics are becoming matter of history. Cholera and yellow fever have been driven from our shores. The ravages of typhoid epidemics are aborted or abridged, save in exceptional conditions where infection of the many has been simultaneously made, or at least made before the source of infection has been determined. Vaccination and sanitation have so modified the virulence of smallpox that it is making its appearance in our midst in so atenuated a form that it is scarcely recognizable. With the disposition of garbage and night soil, the most fertile source for the dissemination of contagion is eliminated. It took a long time and the sacrifice of many valuable lives before the profession realized fully the importance of rendering and maintaining an aseptic condition of the alimentary canal. Pure water and sunshine never played so important a roll as a therapeutic agent or as a prophylactic as it does at the present time. Besides the well trained ear, the educated touch and his keen observation of physical conditions, with modern inventions, the physician has at command far more means to aid him in arriving at a diagnosis. The phonendoscope or the stethoscope contributes very materially in the search for patholigical conditions in the lungs or heart. The laryngoscope, the ophthalmoscope and the otoscope are as indispensable to the general practitioner as to the specialist. By the aid of the mirror and the reflected light, the interior of the bladder and stomach are brought into visual inspection. The proctoscope affords excellent means for the examination of the rectum and colon, as well as for the application of remedies to the diseased area. The microscope affords invaluable aid in the determining of pathological conditions, manifest through the excretions, as well as for classifying of new growths. By its aid, with the recent applied instruments for the chemical and mechanical examination of urine, we are enabled to clear up many heretofore doubtful diseases of the urinary organs, and thus meet more clearly the indications with a rational treatment, and give an intelligible diagnosis of the same. Catheterization of the ureters for diagnostic purposes as well as for treatment of disease of the ureters and kidney has been demonstrated as practical. Bimanual examination of the pelvic viscera is almost wholly relied upon for detection of disease of the uterus and the adnexia. Cerebral localization has been so nearly reduced to a science that diseases and neoplasms within the cranial vault can be so definitely located as to justify surgical intervention. The germ theory of disease has been so thoroughly established that the finding in the blood or excretions, microorganisms, is considered of sufficient import to warrant the rendering a diagnosis of the existence of definite pathological conditions. With the use of the X-ray bony structures are brought into view and new growths, fractures, dislocations and the presence of foreign bodies are definitely determined and located, making surgical intervention intelligible. Local and spinal anesthesia have revolutionized minor surgery.

The therapeutic influence of modified light upon some forms of pathological aggregations, heretofore considered incurable, is of so flattering a character as to inspire new hopes in the afflicted of relief from their dread malady. While sunlight and pure air are being heralded as the "sine qua non" to the successful treatment of tuberculosis. The achievements of serum therapy, so familiar to you all, deserves a passing notice. While hypodermic medication is a Godsend to the suffering, the progress of surgery has been if anything more marvelous. It has attained to that degree of excellency that no part of the anatomy is considered too sacred for its invasion. From the introduction of the Lister spray, following closely upon the bacteriological researches of Pasteur and Koch, there has been a growing realization of the great importance of asepsis, thus revolutionizing surgical practice, until the responsibility of sepsis has been shifted from that of the patient's condition to the untidy surgeon. The slow process of healing by granulation has been expunged from surgical teachings and primary union is the only accepted surgical process of repair. While the frequent dressing of a wound is looked upon as evidence of inefficiency on the part of the surgeon. The presence of "laudible pus" in an operative wound is charged up against the surgeon as evidence of uncleanliness and is looked upon as an incidence due to little less than criminal carelessness. While all these and much more have been accomplished to which we might refer, if time permitted, still the laity are seeking after new and more mysterious methods for the cure of disease. This peculiar unrest of the people was for a time assuaged with the doctrines and practices of Hannaman whose followers have long since denounced his teachings and practices and are today seeking after and prescribing remedies from the broader and more rational fields of therapeutics. With the acceptance of the later developments in the science of medicine and surgery, the elevation of the educational standard of the profession, the genral acceptance of fixed physiological laws, a definite pathology, an etiology no longer questionable and a therapeutics so broad and flexible, we can with a small degree of charity for human frailty embrace all physicians in one common brotherhood and make harmonious action possible.

When we consider the differences of opinions existing among the leading men in the profession, regarding the value of drugs and by some the questionable benefits derived from the administration, and with an occasional one of the profession advancing the idea that the dispensing of medicines is largely a matter of sentiment, we are sometimes made to wonder whether these are not symptoms of old age, and whether the people are not having reasonable cause for wavering faith in the integrity of the profession. Yet may we not think it strange? That at this time, in the twilight of the departing century, while the west is still illumined by the fruitful results of a researchful era! While the disappearing stars of genius, whose radiance has not yet disappeared from the zenith reflecting the achievements of a receding profession, as the ascending luminaries of the new century, already darting forth their early morning radiance, stretching across the eastern horizon, mingling with and imbibing fresh inspirations from the achievements of the fruits of untiring energy of the fading stars in the horizon of the nineteenth century; when we apparently behold approaching a new heaven and a new earth, I say we may well think it strange that the laity should weary with scientific medicine, and the infinitesimal, and demand something new, supernatural, vague and etheral, and in this they are being supplied with Osteopathy, Dowieism, and Christian Science, who advocate false doctrines and satisfy their deluded followers with potenized deception. Their doctrines and theories so at variance with all established principles of sanitation and hygiene, eat like a canker and threaten destruction to existing laws and endangering the people to unrestricted spread of communicable diseases. That which seems most strange to me is the liberal following that these false doctrines are having, and I am loth to say that their followers come from that class of people whom we are obliged to recognize from their educational attainments as the more intelligent from whom we have a reasonable right to expect better things. This condition of things rather impresses us that education is something unfruitful in its purposes, either in generating profound conceptions or in directing to logical conclusions. In the face of existing conditions, is it not a part of wisdom for the legalized profession to put forth their combined effort to permeate the true principles of scientific medicine, the mission of which is not only to cure disease, but to prevent disease as well. The Seneca County Medical Society, composed of the progressive physicians of one of the leading counties of the State of Ohio, should not hesitate to stand in the front rank, if not to take the initiative in any act that has for its purpose the betterment of the profession and the maintenance of public health, as well as for the suppression of all false teachings that have for their purpose the circumscribing of professional influences. The frequent assembling of the profession in social function or counsel has a very salutary influence; it is educational, it keeps us in touch with public sentiment and professional advancement; old acquaintances are perpetuated, new ones formed, experiences compared. possibly new ideas advanced, and it engenders in us new aspirations and greater regard for the profession and enlarges the cloak of charity. When we consider the progress made during the last half century, with the present organized profession ready for concerted effort, what may we! nay, what have we a reasonable right to expect from the profession in the next half century? Let us, the coming year, spare no pains to make this one a year of personal effort to aid in the advancement of the interests of this society and thus the betterment of the profession at large.

The C. H. & D. Railway Surgeons Association held a meeting at Arcade building, Fourth and Ludlow streets, Dayton, November 14. President, Dr. M. F. Hussey, Sidney, Ohio. Secretary, Dr. Mark Millikin, Hamilton, Ohio. "Burns and Scalds," Dr. J. W. Costolo, Sidney, Ohio. "Conservatism in Emergency Surgery," Dr. W. E. Rice, Tuscola, Ill. President's address, "Use and Abuse of Plaster Paris," Dr. Chas. E. Caldwell, Cincinnati, O. "What Can the Surgeon do for the Company?" Dr. A. B. Frame, Piqua, O.

Society and Association Proceedings.

COLUMBUS ACADEMY OF MEDICINE.

Regular Meeting, November —, 1905.

F. F. Lawrence, President. Chas. J. Shepard, Secretary.

Members present, 46. Dr. E. L. Gilliam presented two cases of hernia and reported operations.

Dr. Waters read a paper on "The Treatment of Valvular Lesions of the Heart." Discussion by Drs. Loving, Rankin, Wilson and Upham. Dr. E. L. Gilliam read a paper on "Prostatic Hypertrophy." Discussion by Drs. Youmans, Warner and Means.

Regular Meeting, November 20, 1905.

Members present, 46. Pathological specimen of spinal cord from a fractured vertebrae case presented by Dr. Leach. Dr. McClure reported case for diagnosis.

Dr. Goodman read a paper on "Genital Hemorrhage." Dr. E. J. Wilson read a paper on "Graves' Disease and Some of Its Anomalies." Discussion by Drs. Kinsman, Upham, Clark and Hatton.

Drs. E. T. Tidd, Fred Fletcher and G. M. Clouse were elected to membership.

Regular Meeting, December 4, 1905.

Members present, 48; visitors, 9. Pathological specimen presented by Dr. Baldwin.

Dr. Stage read a paper on "The Efficacy of Medicine." Discussion by Drs. Winders, Courtright and Waters. Dr. Clemmer read a paper on "The New Disease." Discussion by Drs. Waters, Phillips and Deuschle.

A vote of remembrance was extended to Dr. W. D. Hamilton with congratulations on his recovery from recent illness.

The resignation of Dr. Deuschle as delegate to the State Medical Association was received and accepted.

Dr. A. B. Nelles was elected to membership in the Academy.

The Marion County Medical Society at the regular monthly meeting entertained a large number of guests from surrounding cities at the Commercial Club house on Wednesday evening, November 8. The meeting was held in one of the handsomest dining rooms of the club. After the regular routine of business, an interesting scientific program was rendered.

Dr. John D. Dunham, of Columbus, read a highly interesting paper on "Chronic Gastritis." Dr. H. C. Rutter, of Columbus, read a very interesting paper on "Neurasthenia." The papers were discussed by most of the members present.

The program was followed by a buffet luncheon. Chef Weiffenbach distinguished himself as the artisan in his department. The luncheon was followed by a smoker and social session. The members of the society were pronounced royal entertainers.

The committee on arrangements: C. E. Sawyer, President; Dana O. Wells, Secretary; E. O. Richardson, L. D. Hamilton and J. B. Taylor, all of Marion.

Those present besides the twenty-three members of the Society were: Dr. Hiner, of Lima; Dr. Mills, of Marysville; Dr. W. A. and Harry Belt, F. D. Bain, Jesse Snodgrass and Phillips, of Kenton, and Drs. Rutter and Dunham of Columbus.

The monthly meeting of the Hancock County Medical Society was held at Findlay, Ohio, October 12. Four new members were taken into the society: M. S. Williamson, of Findlay; W. J. Zophi, of Findlay; R. N. Lee, of Mt. Blanchard, and A. J. Roycroft, of Fostoria. The next meeting will be held at McComb, November 2.

The Jefferson County Medical Society held its meeting October 10, at Stubenville. Papers were read by the following: Enoch Pearce, "The Consultant; His Relation to the Physician in Charge"; J. W. Collins, "Dispensing versus Prescribing"; H. H. Wood, "The Doctor as a Business Man"; J. S. M. Floyd, "The Advancement of a Uniform Fee Bill in Jefferson County."

The forty-fourth regular meeting of the Canton Medical Society was held Friday evening, December 8. Dr. Frank Kahler, of Canton, Ohio, read a paper on "Chronic Constipation."

Periscope.

THE WORK OF THE IMPERIAL CANCER RESEARCH FUND.

Two further reports upon the work done by the officers of the above fund have recently been published. They take the shape of two blue-books, Part I dealing with the statistical investigation of cancer,[2] Part II with the growth of cancer under natural and experimental conditions. Both volumes contain matter of the highest importance. (From The Hospital, September 2, 1905.)

The report insists upon the necessity for a microscopic corroboration of the diagnosis of cancer. Inquiries into the relation between the results of clinical and gross post-mortem examination on the one hand, and microscopical examination on the other proved that the former two, considered alone, were a fruitful source of fallacy. For the purposes of the Fund-statistics therefore, separate groups have been made to embrace cases in which a microscopic examination was made and those in which it was omitted. Further, a preliminary examination of hospital records showed that the frequency of microscopical investigation varied with the site of the tumor, those tumors which are most accessible to physical examination being most frequently so investigated. In all situations the histological examination revealed important errors in diagnosis, but the error was greatest when the tumors were most inaccessible. Three anatomical groups have therefore been instituted for purposes of statistical convenience. A, accessible; B, inaccessible to careful physical examination; and C, in intermediate group.

In order to determine what may be called the "normal" error in diagnosis a search was made in hospital records during 1903. A total of 866 new growth, of which microscopical records existed, showed that in 683 cases a correct diagnosis of malignancy was reached, in 152 cases the growth was malignant but undiagnosed as such, while in 31 a diagnosis of malignancy was discredited by the microscope. These figures sufficiently emphasize the fallacies vitiating any but the most careful statistics. They are borne out moreover by subsequent tables based upon the card-index reports adopted by the fund; these latter tables show that of the accessible cases some eight per cent. go undiagnosed, the percentage rising to 38 in the case of inaccessible tumours. The error in diagnosis is higher among children than among adult patients.

It has long been held that sarcoma was a malignant process peculiarly affecting the young, but the investigations of the fund prove that this is not so. It has been found from an analysis of the hospital cases that malignant tumors in certain selected sites are invariably sarcomatous. These sites are the globe of the eye, the orbit, the arm and leg, the pelvic bones and the buttock. On the assumption that malignant growth in these situations are sarcomatous, the returns of the Registrar-General show that the frequency of sarcoma increases with age in the manner long known to be characteristic of carcinoma. This result indicates the important conclusion that sarcomata and carcinomata are manifestations in different tissues of a process which is essentially the same. If this be so it is clear that their points of similarity, rather than their points of difference, are likely to throw light upon the fundamental phenomena of either.

Carcinoma and sarcoma, therefore, both occur with increasing frequency as age advances. The national figures show that the incidence of malignant new growths among the same number of persons is ten times as great at the age of seventy as it is at the age of thirty. The neglect of this fact has vitiated many statistical investigations designed to prove the endemic character of the disease in certain geographical districts. This added frequency suggests a correlation between cancer and the periods of decline in reproductive activity. But the occurrence of cancer in castrated and spayed animals at the same ages as in entire animals shows that neither an abnormal internal secretion in the reproductive organs, nor the cessation of a normal one is the cause of cancer.

The same rule of age-incidence which is observed in cancers of men is found to hold in the case of animals. Whenever aged cows are slaughtered in large numbers cancer is not infrequently discovered during inspection of the carcases. Among 62,935 home cattle of all ages slaughtered at Glasgow malignant new-growth with extensive dissemination was discovered in 27, all the latter being aged cows imported from Ireland. In the following year 131 malignant new-growths were found among 43,362 carcases, 116 of the former again occurring in aged cows from Ireland. The question of age, therefore, acquires an overwhelming importance in any inquiry into the local frequency of cancer. In all domesticated animals the age at which malignant new-growths make their appearance stands in a direct relation to the normal duration of life in each species, so that the ratio of the periods of relative freedom from cancer to the normal duration of life remains the same for all the observed varieties of animal. But not only has each individual the normal age limit of his species. The cellular elements of different organs have their own mean duration of activity, and cancer affects these organs in their respective senility. Thus the chorion has a short life, and chorion-epithelioma appears at an interval after fertilisation which corresponds to the declining age of the chorin. The mamma and the uterus live longer, but the maximum incidence of cancer upon them is at the era of their physiological decline. The skin remains functional long after middle life, and the greatest frequency of squamouscelled carcinoma is correspondingly deferred.

Inquiry has been made as to the alleged discrepancy between the frequency of cancer in England and Ireland repsectively. Returns appear to show that while of the admissions to metropolitan hospitals the proportion of cancer is as 1 to 20, in Irish hospitals it is as 1 to 36. The conclusion arrived at by the Fund investigators is that the discrepancy is artificial and depends upon the infrequency with which post-morten examinations and microscopical examinations are conducted in Ireland as compared with London.

As regards the ethnological distribution of cancer the available data are not yet sufficient for detailed deduction. None the less, they show that cancer occurs among all the races and under all the climates of the empire. Nor does diet exercise any marked influence upon the occurence of the disease. Both in the case of animals and man, the carnivorous and vegetarian alike supply victims for the malady.

The general conclusion drawn from the records so far supplied to the staff of the Fund is that, if England be taken as a standard, the precision with which cancer is identified progressively diminishes throughout the empire, and thus the extent to which it is recorded is inversely proportional to the difficulties to be overcome in obtaining information. This apparent platitude cannot be neglected, for it supplies what is probably the correct interpretation of the alleged increase in the occurrence of cancer. The data tend to show that malignant new-growth undoubtedly attack fishes, that they attack the lower mammals with a frequency far greater than was previously believed to be the case, in fact, that the reputed increase depends upon an enhanced precision in the matter of diagnosis.

It has been said that the death-rate from cancer progressively diminishes as younger age-periods come into view. It is important to note that this diminution does not extend backwards uniformly to birth. The minimum is reached between the fifth and the fifteenth years, the curve rising again as the date of birth is more nearly approached. There is hitherto no explanation of this tendency.

Part I concludes with a series of useful tables of accurate statistics from various sources throughout the empire. The whole volume gives evidence of accurate and laborious work, but it is regrettable that greater lucidity and coherence has not been attained in the arrangement of the varying sections of which it is made up.

THE COLUMBUS MEDICAL JOURNAL.

A Monthly Magazine of Medicine and Surgery.

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DECEMBER, 1905.

Editorial.

STATE HOSPITAL FOR THE CRIPPLED, RUPTURED AND DEFORMED.

Nebraska has added to her public institutions a state hospital for crippled, ruptured and deformed children which was opened for the reception of patients about July 1st, of this year. A building, which had been used as a state home for the friendless, was appropriated for the use of the new hospital. It is under the direction of the State Board of Public Lands and Buildings.

It provides for hospital care and treatment for "crippled, ruptured and deformed children and those suffering from diseases from which they are likely to become crippled or deformed."

The hospital is designed for the care and treatment of such children as are described above and whose parents or guardians are unable financially to provide the care necessary to the welfare or recovery of the patient. In general only patients between two and one-half and sixteen years of age are admitted, though there is a provision for the admission of those over sixteen and under twenty at the discretion of the superintendent. The institution is to be conducted as a hospital and not as an asylum or home, and hence only those will be retained at the hospital who give promise of being benefited by the care and treatment.

All physicians realize the importance of the work which can be accomplished in such a hospital. Two years ago an effort was made to secure legislation in Ohio for the establishment of a similar institution. We trust that the matter will be taken up again and that the work attempted at the Nebraska hospital and others of a like nature will serve to demonstrate the great good that can be accomplished by such an institution.

NEW SECRETARY OF THE STATE MEDICAL BOARD.

Dr. David N. Kinsman was elected, November 11, Secretary of the State Board of Medical Registration and Examination. He will assume the duties of the office the first of January.

Dr. D. N. Kinsman

Dr. Kinsman is widely known as a practician, consultant, and medical teacher. He was educated at Deerfield Academy and the Medical College of Ohio, graduating from the latter institution in 1863. After three years of practice in Circleville he located in Lancaster. In 1871, upon the resignation of Professor Reamy as Professor of "Diseases of the Puerperal State and of Diseases of Children" in Starling Medical College, Dr. Kinsman was elected to fill the vacancy. Two years later he moved to Columbus. From 1875 to 1891 he was Professor of Practice of Medicine and Dean of the Faculty in Columbus Medical College. From 1891 to 1896 he was Professor of the Practice of Medicine at the Ohio Medical University, and Chancellor of that institution since 1898. Thus he has had thirty-four years of continuous teaching in medical colleges.

His extensive acquaintance with medical men, medical legislation and the wants of the profession, eminently fit him for the discharge of the duties of this important office. With the distinct oversight of medical education by the Board it is very important that the executive head of the Board have full knowledge of the wants of the profession in reference to the details of medical education. This is evident when we consider that the Board has the fixing of the standards of qualification, both for entrance into the medical schools and of license to practice. It is to the raising of standards here that we must look for the betterment of the educational qualifications of our profession. The Board is to be congratulated on securing the services of a man so well fitted for the position. Dr. Kinsman carries with him into this new field of labor the love and best wishes of his host of pupils and professional friends.

PIONEERS OF MEDICAL EDUCATION IN COLUMBUS.

The April number of the *"Old Northwest" Genealogical Quarterly* contains a very complete History of Starling Medical College from the time of its organization down to 1882. The article is entitled a "History of Starling Medical College" and was prepared by Dr. Starling Loving, and read at the fiftieth anniversary of the founding of the college. It is illustrated with twenty-eight photoengravures of distinguished men connected with the college.

Through the courtesy of the author of the article and the editor of the *Quarterly* we are permitted to reproduce these illustrations. Lack of space prevents us from giving all of them.

The history of the college has been previously given in this journal and is familiar to our readers. The "biographical notes," together with the portraits, will, we feel sure, be of general interest to the profession. We have made brief abstracts from the body of the article and reproduced the "Biographical Notes" appended thereto.

Mr. Lyne Starling, for whom the college was named, donated in all thirty-five thousand dollars, for the purpose of establishing a medical school and hospital. One condition of the donation was that the officers of the school should care for a hospital "which he desired to see established in connection with it, and find places in its corps of teachers for Drs. Carter and Smith. When the changes consequent upon Mr. Starling's donation had been completed, by a vote of the trustees and faculty the name of the school was changed from Willoughby Medical College to Starling Medical College of Columbus. Mr. Starling had not asked for such change of name nor was it known that he expected anything of the kind, but he accepted the compliment, and was pleased, because as he said, *the school and the hospital might in a kindly way perpetuate his name!*

Lyne Starling was of English extraction. His ancestor, William Starling of Stopplesy Hall, was Lord Mayor of London in 1670. A grandson of the Lord Mayor, also named William Starling, emigrated to Virginia in 1640 and settled in King William Co., where he m. Jane Gordon, the dau. of a Scotch physician. Their son William m. Susannah Lyne and afterwards moved to Mercer Co., Ky.

Lyne Starling, the fourth son of William and Susannah, was born December 27, 1784. When quite a youth he was placed in the office of the clerk of Frankfort, Ky., and when just at young manhood he was brought by his brother-in-law, Lucas Sullivant, to Franklinton, now part of Columbus.

"In 1806 he entered the county clerk's office and was a subsequently appointed clerk, which office he held for a considerable period. He afterwards became a partner of Mr. Sullivant and was the administrator of his large estate. He was an enterprising trader and a contractor for supplies for the army under General Harrison. He, with John Kerr, Alexander McLaughlin and James Johnston, in 1812, entered into a contract with the state of Ohio to donate lands, money and buildings to the state, in consideration of having the seat of government located on lands owned by them. This was the beginning of Columbus, the growth of which made Mr. Starling a very wealthy man while in the prime of life.

His health failing him he spent much time in travel, going abroad, and visiting every section of his own country. During his latter years he suffered much from nervous trouble. He died November 21, 1848, aged sixty-five; unmarried." Judge Gustavus Swan said of him: "He was by nature empratically a great man. He had a quiet and clever perception, a retentive memory, a sound and unerring judgment. During the last few years of his life he gave away to public and private objects over one hundred thousand dollars."

Lyne Starling, Esq.

Dr. John Butterfield

Dr. John Butterfield was elected Dean at the organization of the college and also one of the trustees, both of which positions he held until his decease, which occurred in the autumn of 1849. He was in failing health when he came from Willoughby.

"Prof Butterfield was a man of great ability and learning, an excellent teacher, and almost an enthusiast on the subject of medicine. He was largely instrumental in bringing the Willoughby school to Columbus and one of the first to advocate the change of the name to Starling Medical College.

Dr. John Butterfield was born in a small town near Lowell, Mass. He studied medicine with Dr. Daniel Moore, of Lowell, and married a sister of Mrs. Moore, Miss Sarah Knapp Whitimore, of Salibury, N. H.

Soon after his marriage he moved to Willoughby, Ohio, and then to Columbus. He died September 7, 1849, in Salisbury, N. H., of pulmonary consumption. "He was a ripe scholar, a popular lecturer, a discriminating writer, a Christian without austerity and a gentleman without ostentation."—O. S. J. of Sept. 17, 1849. He was buried at Lowell, Mass. He had no children. After some time the widow married General Joseph Geiger.

Dr. Lincoln Goodale, the donor to the city of Columbus of Goodale Park, succeeded Professor Butterfield as trustee.

Lincoln Goodale, born in Worcester, Mass., February 25, 1782, died April 30, 1868. He was a son of Captain Nathan Goodale, who came to Ohio with the Marietta party, later settled at Belpre, and was captured by the Indians in 1795 and never after heard of. Lincoln was then thirteen years old. In 1805 he commenced the practice of medicine at Franklinton. He was a surgeon in McArthur's regiment and present at Hull's surrender. In 1814 he moved across the river to the new town of Columbus and entered upon general business and land speculation. During thirty years he accumulated a large fortune. He donated to the city the forty acres now known as Goodale Park. He never married.

Dr. Samuel M. Smith, of Columbus, was professor of Materia Medica and Medical Jurisprudence. He succeeded Dr. Butterfield as Dean of the Faculty.

Professor Smith was a native of Ohio, a gentleman of fine literary attainments and great profession skill. He was a graduate of Miami University and of Jefferson Medical College. His first professional service was in the old Central Hospital for the Insane, where he served as assistant under the late William Mellay Awl, chief physician and superintendent. After having served at the asylum four or five years, he resigned and commenced private practice in this city, in an office on Rich street, near High. He afterwards purchased the property at the northeast corner of Fourth and State streets, where the Norwich hotel now stands, and resided there until his death in 1874. He was one of the original anti-slavery men of this state, and lost no opportunity to express his dislike for the "divine institution." He was one of the first in this region to join the Republican party, and gave much of his time and money to assist in forwarding the aims of that party. During his long and useful career he had the confidence and friendship of all who knew him, and in addition to his connection with the medical college, held many offices of trust and honor. He was for many years one of the trustees of the asylum in which he gained his first professional experience, and during the terms of Governors Dennison and Tod was the surgeon general of the state. The latter office during the war of the Rebellion was a most onerous position, involving a vast amount of mental and bodily labor, which, with the anxiety incident to the many disasters which befell our armies during the first year of that struggle, sapped the doctor's health and together formed the remote cause of his death. The statute erected by his wife and daughters, and by the consent of the city council placed at the southeast corner of Broad and High streets, was, if I am correctly informed, the third statute erected to the memory of an individual in this state.

Dr. Lincoln Goodale

Dr. S. M. Smith

Samuel Mitchell Smith, born in Greenfield township, Highland county, O., November 28, 1816, was the only son of Samuel and Nancy (Mitchell) Smith. His mother, who was under twenty years of age, died a few days after his birth and he was cared for by her parents for several years until his father's mariage with Sarah Galloway, sister of the Hon. Samuel Galloway, when he returned to his father's house. His father was engaged in the business of a tanner, and was of the strictest sect of Presbyterians, and also an ardent Abolitionist. He graduated at Miami University in 1836, and for two years afterwards taught school in Rising Sun, Ind. He also attended two courses of medical lectures in Cincinnati, reading with Dr. Morrison, of Rising Sun. He then went to Philadelphia and graduated at the University of Pennsylvania. Soon after returning to Highland county to begin practice, he heard of a vacancy at the Central Insane Asylum at Columbus, under Dr. Awl, applied for and obtained the position, beginning duty about August 1, 1840. On July 10, 1842, he left that position to begin the practice in Columbus which he continued until his death, November 30, 1874. He was appointed trustee of the Central Insane Asylum by Gov. S. P. Chase in 1856 and served for eighteen years. He was appointed on the Board of Examiners of Army Surgeons in 1861, was Surgeon General under Governor Tod, 1862-64, Examiner of Pension Applicants and physician at the Deaf and Dumb Institution. From 1865 to 1873 he was one of the proprietors of the Ohio State Journal, and a candidate for the state senate in 1871. He visited Europe in 1872 as delegate to the International Reform Congress in London. He was a trustee of Miami University from 1866 to 1869, and an elder of the Second Presbyterian Church of Columbus for some years. The cause of the slave had his sympathy and the underground railroad his active help. One said of him, "A liberal and public spirited citizen, a large hearted man." He married in 1843, Susan, daughter of General Charles Anthony, of Springfield. His two sons died in early manhood; his daughter Elizabeth married General James M. Comly, some time editor of the Ohio State Journal and Toledo Commercial, and minister to the Hawaiian Islands, 1877-82. His daughter Frances married J. P. Jackson, a journalist of New York City.

Dr. Francis Carter was a member of the original board of trustee and of the faculty, being the secretary of the latter body, and in 1866 Dean.

Dr. Carter, born in Kingston, Ireland, 1814, died in Columbus, O., February 26, 1881, was the second son of Major General

Carter of the British Army. He graduated at King's College, Dublin, obtaining the degrees of M. A. and M. D. He came to America with his brother William in 1838 and settled in Hillsboro, O., where he married Miss Annie Starling, a niece of Lyne Starling. Shortly afterwards he removed to Illinois and engaged in farming. Not finding that pursuit congenial he returned to Ohio and came to Columbus in 1844 and entered upon the practice of his profession, which engaged the rest of his life.

After the death of his first wife he married Miss Margaret Reed, of Springfield, Ky., who died. His third wife was Miss Isabella Espy, of Columbus, who survived him. His children are, Mrs. Joseph Landes, of Kentucky, Mrs. Henry Wood, of Englewood, N. J., Mrs. Stanley Thomas, of Fremont, O., and Mrs. S. C. Norton, of Columbus.

Dr. Francis Carter

Dr. R. L. Howard

Dr. Richard L. Howard, the first professor of surgery of the college, was, for a number of years, editor of the Ohio Medical and Surgical Recorder, and Dean of the faculty from 1859 to 1866. His death in the latter year "was much regretted and was a misfortune for the school."

He had labored assiduously for its success, and the full classes of the first years were in large measure due to his efforts in the lecture and operating rooms. He had pleasant manners, was an easy and fluent lecturer and an accomplished operator. He was the first in Columbus to devote his entire time to surgery, and his success in that province of medical science was unusual. He was progressive, and constantly on the watch for developments and improvements in his department. The discovery of Anesthesia gave him great pleasure, and he was the first in Central Ohio to use chloroform as an anesthetic (January, 1849, less than two months after the discovery of the anesthetic properties of that drug by J. Y. Simpson, (Edinburgh).

Dr. R. L. Howard was born in Andover, Vt., in 1809. He was educated in the common schools and the Berkshire Medical College in Pittsfield, Mass., receiving the degree of M. D. there in 1831. He settled in Columbus in 1844, where he died January 16, 1854. He was for several years editor and proprietor of the Ohio Medical Journal. He was twice married. His second wife, whom he married April 20, 1843, was Elizabeth, daughter of Thomas Darling (b. in Mendon, Mass., June 21, 1785), of Chesterfield, Mass., where she was born December 20, 1819. She died in La Porte, Ind., September 30, 1899.

Their children were: Elizabeth, who married Francis Foxcroft, a journalist of Boston, Mass.; Isabella, who married Charles Butler, of Columbus, and Richard L., who died some years ago.

THE COMBINED BACCALAUREATE AND MEDICAL COURSE.

There is perhaps no question at the present time of more vital interest to the friends of medical education than the adjustment of the literary and medical course in our colleges in such a way that the studies of the first medical year may be made electives in the literary course.

Such combination is the rule in universities having medical and literary departments. In these the two courses are very often lapped so that both the literary and the medical degree can be secured in six years. It could not be hoped to make such an arrangement between the independent literary and medical colleges, but it does seem reasonable that the literary course in the independent literary colleges can be so arranged that, for those anticipating the study of medicine, the medicinal studies of the first medicinal year may be electives. Such adjustment can, no doubt, be made by most of the literary colleges without great difficulty. Larger facilities for teaching the sciences might be required in many instances.

The question of the cultural value of medical studies seems to be raised by most literary colleges, yet the evidence in favor of their cultural value is very strong and seems to be entirely satisfactory to universities having both medical and literary departments. The very fact that the leading universities of the country, Harvard, University of Pennsylvania, Cornell, Michigan, are willing to make the medical studies elective in the literary course, thus count for the literary degrees, is a strong argument in favor of the cultural value of these studies.

The state boards, with few exceptions, accept work thus carried out in the literary college as entitling the student to sophomore standing in a medical college. This question is, at present, under consideration by the New York Board of Regents, and doubtless the final judgment will be that students completing the literary course which includes a large proportion of the sciences of the first medical year will be entitled to advanced standing in the medical college. A few states, including Minnesota, Kansas, New Jersey and Kentucky, require four full years of resident medical attendance at the medical college. As long as these same states make, as their minimum standard, graduation from a recognized high school, it is evident that this rule is arbitrary and unreasonable, for it is hardly fair to place literary graduates in the same class with high school graduates. They are capable, as a rule, of accomplishing far more work, and it is an evident injustice to them to hold them back to the place of the high school graduate.

This subject is receiving considerable attention throughout the country. The Ohio College Association, this year, has an excellent program for a joint session with physicians and others interested in the medical education, for their meeting in December. Able men are on the program and the most vital and practical questions connected with the situation in Ohio are to be discussed at this meeting. The following is the program:

Joint Session with the Ohio College Association. Supreme Court Room (new part of State House, second floor). 7:30 p. m., Tuesday, December 26.

General Subject: "The Combined Baccalaureate and Medical Course."

The Cultural Value of the Fundamental Studies—Dr. J. P. Sawyer, Professor of Medicine, Medical Department, Western Reserve University. Discussion: Dr. G. W. Knight, Professor of History, Ohio State University; Dr. E. L. Rice, Professor of Biology, Ohio Wesleyan University.

What Medical Subjects can be and what can not be Properly and Efficiently Taught in the Literary College—Dr. A. M. Bleile, Professor of Physiology, Ohio State University and Ohio Medical University. Discussion: Dr. C. J. Herrick, Professor of Biology, Denison University; Dr. L. B. Walton, Professor Biology, Kenyon University; Dr. W. F. Mercer, Professor of Biology, Ohio University; Dr. F. L. Landacre, Assistant Professor of Zoology, Ohio State University and Ohio Medical University.

The following resolution has been passed by the Ohio State Board of Medical Registration and Examination: Resolved, That after 1905, Advanced Standing which has been given for A. B. and B. S. degrees be not recognized by this Board unless the candidate to whom it has been given has, during the academic course, done the science work comprised in the first year of the medical course.

What Science Work will be held by the Board as Satisfying the Requirements of this Resolution? Will the Board issue Certificates to Students Whose Literary Course Fulfills this Requirement?—Dr. E. J. Wilson, Member State Board of Medical Examiners. Discussion: Dr. J. K. Scudder, Member State Board of Medical Examiners; Dr. A. Ravogli, Member State Board of Medical Examiners.

The Administrative Side of the Question from the Standpoint of the Literary College—President E. W. Hunt, Denison University; President H. C. King, Oberlin College; President Herbert Welch, Ohio Wesleyan University; President C. W. Dabney, University of Cincinnati; President A. B. Church, Buchtel College; President W. F. Peirce, Kenyon College.

There has been a call issued for a meeting of medical college teachers to be held at the Great Southern Hotel at two o'clock, Tuesday, December 26, with a view of organizing a state association of medical teachers. A brief program has been arranged for this meeting. The program follows:

The Advantages and Purposes of an Organization of the Medical College Teachers of the State—Dr. J. U. Barnhill, Ohio Medical University. Discussion from the floor. Organization.

The Medical College Curriculum; The First Two Years—Prof. C. C. Howard, Starling Medical College. Discussion: Dr. J. G. Spenzer, Cleveland College of Physicians and Surgeons; Dr. C. B. Morrey, Starling Medical College.

The Medical College Curriculum; The Last Two Years—Dr. J. C. Oliver, Miami Medical College. Discussion: Dr. G. J. Jones, Cleveland Homeopathic Medical College; Dr. W. J. Means, Ohio Medical University; Dr. W. A. Dickey, Toledo Medical College; Dr. J. U. Lloyd, Eclectic Medical Institute.

The Relation of the Literary and Medical College—Dr. R. P. Daniels, Toledo Medical College.

Should Advanced Standing as Regards Medical Residence be Given to Graduates of Literary Colleges, or Should Four Years of Medical Residence be Invariably Required?—Dr. A. Ravogli, Medical College of Ohio. Discussion from the floor.

What Subjects and How Much Work in Each Should be Required of a Graduate of a Literary College to Gain a Year's Advanced Standing in the Medical Colleges of this State?—Dr. G. M. Waters, Ohio Medical University; Dr. C. F. Clark, Starling Medical College; Dr. F. C. Waite, Medical Department, Western Reserve University. Discussion from the floor.

It is to be hoped that every college in the State will be represented by several members of its faculty, that the interchange of ideas will be stimulating and helpful to the cause of medical education, and that sufficient interest will be manifested to secure a permanent state organization of medical teachers with privilege of membership extended to the members and officers of the State Board of Medical Registration and Examination and to the teachers of medical sciences in the literary colleges.

STUDY OF THE ETIOLOGY OF SYPHILIS.—Schaudium and Hoffman working in the laboratory of the Imperial Board of Health in Berlin, found in primary syphilitic lesions, lymph glauk and condylomata a spiral microörganism which they have named *spirochaeta pallida.* Levaditi of the Pasteur Institute, Metschnikoff and Roux announce the discovery of a similar organism. Flexnor and Noguchi of the Rockefeller Institute for Medical Research, in the study of four cases of recent syphilis demonstrated the presence of the same organism.

Medical News Notes.

Dr. A. S. Barnes, formerly of Groveport, Ohio, is now located at Botkins.

Dr. A. F. Kaler, formerly of this city, has located at New Holland, Ohio.

Dr. S. B. Taylor has moved his office from East Rich street to 186 East State street.

Dr. John Dennison, who was located at Blatchford, has moved to Crooksville, Ohio.

Dr. Yeatman Wardlow has moved his office from 120 East Broad street to 106 East Broad.

Dr. H. C. Rutter has moved his office from the MeLene building to Park View sanitarium.

Dr. W. D. Hamilton, of this city, who was operated upon for appendicitis November 21, has entirely recovered.

On December 4, Dr. S. J. Goodman read a paper on "Genital Hemorrhage," before the Pike County Medical Society.

Dr. Frank Winders attended the meeting of the County Medical Society at Urichsville, last month, and read a paper on "Serum Therapy."

For Sale.—Office fixtures and supplies. Will sell right if at once. Town about 600; good farming community; collections good. Address G. Maxwell, M. D., Sidney, O.

On December 5, Drs. J. H. J. Upham and Chas. J. Shepard attended the meeting of the Guernsey County Medical Society at Cambridge, Ohio. Dr. Upham read a paper on "The Diagnosis of

Incipient Pulmonary Tuberculosis," and Dr. Shepard presented a paper on "Acne Vulgaris and Acne Rosacea."

Vermont Medical Examination.—Dr. W. Scott Nay, secretary of the Vermont State Board of Medical Registration, (J. A. M. A.) reports the written examination held at Burlington, October 10-12, 1905. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 11, all of whom passed.

Professor G. H. Darwin's striking inaugural address at the meeting of the British Association for the Advancement of Science, on "Evolutionary Speculation," was given in two parts, the first at Capetown, and the second at Johannesburg. It has attracted much attention in scientific circles. The first part is given entire in The Living Age for September 23 and the second in October 14.

Oregon Medical Examination.—Dr. B. E. Miller, secretary of the Board of Medical Examiners of the State of Oregon, reports (Jour. A. M. A.) the written examination held at Portland, July 13, 1905. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 57, of whom 21 passed and 36 failed.

California Medical Examination.—Dr. Charles L. Tisdale, secretary of the Board of Medical Examiners of the State of California, reports (Jour. A. M. A.) the written examinations held at San Francisco and Los Angeles, July 19-21, 1905. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 93, of whom 48 passed and 45 failed.

The committee in charge of the International Medical Congress, which will be held in Lisbon from April 19 to 26, 1906, has written asking for the contribution of papers on the following medico-legal subjects, and saying that as yet no titles of communications touching on any of these subjects have been received from this country: The signs of virginity and of defloration in medico-legal relations. Hand and finger prints; their medico-legal importance. The medico-legal importance of the carunculae myrtiformer. The mechanism of death by hanging. The value of bacteriologic examination of vulvo-vaginal discharges in the determination of venereal contagion. The signs of death by drowning. Ecchymoses of death in legal medicine. Spontaneous and criminal abortions from a medico-legal point of view. Medico-legal investigation of blood stains. The relations between the seat of cerebral contusions and the point of application of the agent which produced them. Epilepsy in legal medicine. The induction of abortion; when is it permissable? The value of legal medicine in the study of criminal law. The best legislation for the protection of the "medical secret" (the obligation imposed upon physicians to treat as inviolable all information concerning patients obtained while in the discharge of their professional duties). The effects of the civil and penal law toward the newborn living infant. Distinction between the natural openings in the hymen and tears of this membrane. Criminal vulvar copulation. Organization of medico-legal services.

If any of the readers of this communication intend to take part in the discussions of this section of the congress, or to prepare papers for it on any of the subjects mentioned, or on any other subject of medicine or surgery, he should inform the secretary. of the American committee. Ramon Guiteras, Secretary, American National Committee, 75 West 55th Street, New York.

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